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DEPARTMENT OF THE INTERIOR
BUREAU OF EDUCATION

BULLETIN, 1918, No. 24

VOCATIONAL GUIDANCE AND THE PUBLIC SCHOOLS

BY

W. CARSON RYAN, Jr.
SPECIALIST IN INDUSTRIAL EDUCATION AND VOCATIONAL GUIDANCE
BUREAU OF EDUCATION

WASHINGTON
GOVERNMENT PRINTING OFFICE
1919

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LETTER OF TRANSMITTAL.

DEPARTMENT OF THE INTERIOR,
BUREAU OF EDUCATION,
Washington, October 31, 1918.

SIR: The fundamental significance of the principles involved in what has been known as the vocational guidance movement has come to be appreciated with special force under the exigencies of war, and will be still more completely understood in the period of reconstruction that is to follow.

The part the schools can play in the movement for better utilization of human resources is an important one. By making known to all the children of all the people what the world's work is and what the opportunities and obligations for service are, the schools can do something no other agency could do so well.

If the schools are to lead in this movement, the teachers will need to be specially skilled in knowledge of the world of occupations; they must have a sympathetic understanding of labor problems, and they must be capable of guiding public opinion intelligently.

The accompanying study, made by W. Carson Ryan, jr., of the Bureau of Education, brings together in accessible form for the use of teachers the contribution of the public schools to the vocational guidance movement in the past ten years. I recommend that it be published as a bulletin of the Bureau of Education.

Sincerely yours,

P. P. CLAXTON,
Commissioner.

The SECRETARY OF THE INTERIOR.

VOCATIONAL GUIDANCE AND THE PUBLIC SCHOOLS.

INTRODUCTION.

The problem of organizing human labor resources has suddenly emerged, like so many other social and economic problems, from the realm of the academic into that of the immediate and practical, largely under the stimulus of war necessity. Through the selective draft act, the Federal employment plan, and specialized training under the War Department, no less than through the vocational rehabilitation and vocational education laws, the United States has undertaken, as never before, to control the distribution of human service.

In a sense this task that the Nation has been engaged in, that of training, enlisting, and selecting workers for the Army, for the essential industries, and for agriculture, is a gigantic experiment in vocational guidance. In authorizing the selective service regulations President Wilson said:

> The time has come for a more perfect organization of our man power. The selective principle must be carried to its logical conclusion. We must make a complete inventory of the qualifications of all registrants in order to determine, as to each man not already selected for duty with the colors, the place in the military, industrial, or agricultural ranks of the Nation in which his experience and training can best be made to serve the common good. This project involves an inquiry into the domestic, industrial, and educational qualifications of nearly ten million men.

For a decade or more the vocational guidance movement has sought to make a contribution to this task with which the Nation was suddenly confronted. It has sought to approach the problem through democracy's chief agent—the public school. Those concerned in the vocational guidance movement have been studying the early school-leaving that has driven so many boys and girls too soon into industrial life; they have tried to find ways of protecting the Nation against the sacrifice of its youth to economic demands; they have sought to bridge the gap between education and industry. Basing their efforts upon voluntary cooperation, they have appealed to boys and girls to continue their education and to make a careful choice of a vocation; they have aimed to counsel, rather than to get jobs or assign tasks; they have tried to present the whole world of human

occupations, to the end that youth might choose for itself the path of useful service.

The present is a significant period in the vocational guidance movement. On the one hand it must utilize the present national interest in the mobilizing of occupations to drive home the importance of proper guidance from the earliest days of childhood; on the other it must see that selecting of the young for national service now is more than mere job getting; that the lure of temporary work at high pay does not divert a boy or a girl from the higher duty of adequate training he owes to himself and to his country. On the basis of what is done now will depend the strength and value of the movement after the war. It is the purpose of this study, therefore, to give an account of the vocational guidance movement as it has developed in the past 10 years, particularly in relation to the public school; to bring together in summary form the investigations that have demonstrated the need for vocational guidance; to show the wealth of material on the occupations that has recently been accumulated for the use of the teacher who would be a counselor; and to report on vocational guidance work as it is actually carried on in many American schools and school systems.[1]

---

[1]A number of unpublished documents containing valuable information have been placed at the disposal of the writer in the preparation of this report. For this and many other courtesies, particularly in critical reading of the bibliography, special thanks are due to Mr. Meyer Bloomfield, Mr. Jesse B. Davis, Mr. W. A. Wheatley, Mr. Charles L. Jacobs, Dr. John M. Brewer, Prof. Frank M. Leavitt, Mr. B. C. Gruenberg, and Mrs. J. A. Reed.

I. THE FIELD OF VOCATIONAL GUIDANCE.[1]

DEFINITIONS OF VOCATIONAL GUIDANCE.

It is inevitable that there should be conflict of opinion as to what constitutes vocational guidance and just how and where it shall be carried out. A critical examination of the literature is reassuring, however, in the evidence it furnishes of a developing agreement in aims and methods.

There are numerous definitions of vocational guidance. It is significant that most of those who have achieved something in the work confine themselves to a statement of what vocational guidance does or aims to do rather than what it is.

The purpose of the first vocation bureau, that in Boston, was declared by its founder, Frank Parsons, to be—

> To aid young people in choosing an occupation, preparing themselves for it, finding an opening in it, and building up a career of efficiency and success; and to help any, young or old, who seek counsel as to opportunities and resources for the betterment of their condition and the means of increasing their economic efficiency.

Meyer Bloomfield, who carried on Parson's work, and whose name is perhaps better known in the movement than that of any other worker, says:[2]

> Vocational guidance aims to make both school and occupation help boys and girls to discover and develop their powers for service, through school programs in charge of specially trained vocational counselors in schools and employment programs in charge of specially trained employment supervisors in the occupation.

Brewer, another investigator in the field, insists that "vocational guidance is bound up first of all with educational problems, and second with economic and social questions."[3] He stresses educational guidance and lays down a program that would include: (1) Laying a broad foundation of useful experiences; (2) studying occupational opportunities; (3) choosing an occupation; (4) preparing for the occupation; (5) entering upon work; (6) securing promotions and making adjustments.

---

[1] Except for the special material in Section VII (p. 92), this bulletin deals only with the United States. For vocational guidance in other countries, see Educ. Bull., 1914, No. 4, "The School and the Start in Life" (Bloomfield).

[2] Readings in Vocational Guidance, preface.

[3] The Vocational Guidance Movement, p. vii.

Snedden[1] declares, with special reference to the secondary school:

It is now clearly within the reach of the secondary school to organize a systematic course in vocational guidance of such a character as quite definitely to minister to two distinct ends—one practical, the other cultural. This course should (1) by objective study of the requirements and possibilities of the various callings in which men engage, by systematic examination of the potential powers of individual pupils, and by the deliberate cultivation of vocational ideals, enable the youth eventually to find his way into a vocation most suited to him; and (2) by giving all pupils a survey of occupations and by having them all study their own possibilities in relation thereto, produce the sympathetic, socialized, and broadened vision essential to highest citizenship and to truly democratic personal culture.

Hiatt recognized that temporarily the problem of relation between the school and industry must necessarily deal with those leaving school to go to work, but that "in its fuller development vocational guidance must have a vital influence upon even the earliest years of school training as well as upon the broadest preparation for the learned professions."

Other writers have gone much further in special prescriptions of vocational direction for early schooling. An excellent summing up of the situation from this point of view is found in the following statement from the report of the Somerville, Mass., schools for 1910:

Vocational guidance in its full meaning involves every measure that tends to inform the public and, more especially, the young as to the nature. requirements, and temporary conditions of the various occupations; to determine for which occupation each one is fitted by capacity and conditions; and to prepare for effective work in the chosen calling.

To limit vocational guidance to advice, general or personal, the latter on the basis of, at best, hastily gathered data as to the make-up of the applicant and frequently at the very threshold of entrance upon the responsibilities of practical life, is inadequate. It is a makeshift, conceived in a thoroughly worthy spirit, to atone in a fashion for previous neglect. The thought of vocational guidance must live, as it were, in every phase of educational work from its earliest beginnings. More and more clearly, as the work of the school proceeds, there should be invitation and opportunity for choice; and when final choice has been reached, this work should assume forms of increasingly deliberate and specific preparation for efficiency in the chosen life career. For full and adequate vocational guidance, in short, education must touch every need, the trend and capacity of every child and of every condition of life.

Recent writers have emphasized particularly that vocational guidance is not merely an attempt to solve the immediate employment questions of the boy and girl leaving school, but a problem of curricular adjustment throughout the schools; that vocational guidance, in the words of Prof. Leavitt—

is not a new function of education, but rather an old function which needs liberal extension, and that this extension lies within two well-defined fields,

[1] School Review, 24: 186. March, 1916.

the first being curriculum enlargement and adjustment, and the second the educational supervision of those who, for any reason, withdraw from the regular or traditional school.[1]

Supt. F. E. Spaulding[2] outlined for the National Education Association in 1915 a number of the problems which vocational guidance is formulating by way of defining its field. Pointing out that "more completely than any other movement, vocational guidance must take for its function the conservation of human resources," Supt. Spaulding argued that the vocational guidance department of every school system should be responsible for an accurate census of the children and youth of the community, and should exercise control over them; that this department should render assistance in determining types of schools and school curricula, and should become "a great repository of knowledge, always up to date and significant, of the two great factors in every community—the children and the work of the community." In Supt. Spaulding's view, vocational guidance should also formulate for itself the problem of the moral effect of the school on the child; it must see that the individual learns to appreciate his own capacities and possibilities; that he informs himself concerning the opportunities for worthy service that the world offers; that he prepares himself as adequately as time and conditions permit to apply his powers to the rendering of the highest service of which he is, or may become, capable, and that he learns to concentrate his thought, his energy and ambition, to this end of large and worthy service.

Still another problem of vocational guidance in Supt. Spaulding's category is a knowledge of opportunities for service, especially in the immediate community, but also in the world at large. Such knowledge, he asserts, must not be confined to industrial and commercial occupations; any opportunity for worthy service, great or small, is the concern of vocational guidance.

As the culminating problem of vocational guidance, Supt. Spaulding would put—

> the successful transition of children and youth from the favorable conditions of healthful growth, and of practical education, which the schools must provide into different but also favorable conditions for continued growth that occupations must be brought to afford.

To carry out the entire undertaking outlined, as Supt. Spaulding freely admits, is beyond the unaided power of any vocational guidance movement that is likely soon to develop. The problem must be solved by the coordinating of existing welfare agencies. "It is the function and the unparalleled opportunity of vocational guidance to cooperate with all such agencies, to coordinate their efforts

[1] Vocational Guidance Bulletin, May, 1916.
[2] Nat. Educ. Assoc. Proceedings, 1915.

and to concentrate them all to the fullest conservation of human resources." For—

Vocational guidance seeks the largest realization of the possibilities of every child and youth measured in terms of worthy service; vocational guidance seeks this, not through the school alone, but through the upbuilding influences that work and life beyond the school ought to afford every human being.

The goal set by Supt. Spaulding is reemphasized in the report of the committee on vocational guidance of the National Education Association Commission on the Reorganization of Secondary Education.[1] Under the heading "Meaning and purpose of vocational guidance," the report asserts:

Vocational guidance should be a continuous process designed to help the individual to choose, to plan his preparation for, to enter upon, and to make progress in an occupation. It calls for a progressive improvement of the public-school system and a fuller and more intelligent utilization of its richly diversified offerings. It requires a more accurate adjustment between the school and all worthy vocations. For some children it demands a plan of continuation education and supervision in employment by educational authorities. It should develop an interest in the conditions obtaining in the child-employing industries and bring about improvement of those conditions. It should utilize the cooperation of all social service agencies that can be of assistance. For society at large, it should result in a more democratic school system, a wiser economy on the expenditure of school time, and a more genuine culture.

VOCATIONAL PSYCHOLOGY.

Probably on no single point is vocational-guidance opinion so sharply divided as on the question of possible contributions by psychology or other methods of charting individual aptitudes. Some investigators, Brewer, for example,[2] reject as unworthy practically all books dealing with this aspect of the subject. Brewer says:

Vocational guidance is not concerned with any "system" of "character analysis," phrenology, physiognomy, or other "short cuts." Neither is it concerned with bombastic talk about "the race for success" and "getting ahead of the other fellow," or other questionable points of view. Neither can it yet find use for tests worked out in the psychological laboratory, nor for hasty generalizations based on such moot terms as "the influence of heredity," "natural aptitudes," "innate qualities," and the like.

On the other hand, Ayres, Leavitt, and many others have continued open-minded, if not friendly. Ayres has apparently not altered his opinion, expressed in 1913, that:

After all allowances are made the inevitable conclusion remains that in vocational guidance the greatest field of immediate development for psycho-

[1] U. S. Bu. of Educ., Bul., 1918, No. 19.

[2] Harvard Bulletins in Education, No. 4, p. v. Brewer is somewhat less severe in his 1918 book, "The Vocational Guidance Movement."

logical tests lies in choosing persons for positions rather than in selecting positions for persons. The possibilities in the former field of effort are inspiring.[1]

The National Education Association report recognizes three types of experimental work in the field of vocational psychology: (1) The attempt to supply the employer with tests that will enable him to select from a large number of applicants those most likely to success in a given position (vocational selection); (2) the attempt to determine specific vocational abilities—that is, which of several occupations would be the best one for a given individual to follow; (3) the attempt to develop tests for the measurement of general intelligence.

The commission is definitely of the opinion that—

we should welcome continuous experiments in the field of vocational psychology, but we should put the primary emphasis upon education, training, and supervision. The ideal vocational counselor will be something of a psychologist, but he will also be a sociologist, an economist, and, most of all, an educator in the best modern sense of the word.

Psychologists who are interested in the possibilities of their science in vocational guidance point especially to the work of Seashore in testing musical ability; to the experiments and tests applied in the Bureau of Salesmanship at Pittsburgh by Scott, Bingham, Whipple, and Miner; to the courses for business men by Watson in Baltimore, Adams and Breese in Cincinnati; and to Mrs. Woolley's work in the vocational bureau at Cincinnati.[2] Mrs. Woolley's work remains a bone of contention among vocational guidance workers. No one questions her earnestness and ability, but Brewer, in the bibliography previously cited, is of the opinion that "it is doubtful whether other bureaus should at present attempt similar experiments."[3] One of the sessions of the 1912 vocational guidance conference (New York) was given over to vocational analysis, and the vigor of the discussion at Philadelphia five years later indicates that agreement is still far distant.

So far few attempts have been made, however, to connect this work directly with the public schools. Kitson has studied the doctrine of interest in this particular relation. Believing, as he does, that vocational guidance is a movement of great ultimate significance, "affecting society through and through," he has become con-

[1] Journal of Educational Psychology, September, 1913. Brewer considers this article "too sanguine," and notes that "many subsequent writers have quoted it with no attempt to verify its conclusions." Op. cit., p. 3.

[2] American Psychological Association. Report of the Committee on the Academic Status of Psychology. Differentiations between psychological experiments and mental tests. Swarthmore, Pa., December, 1916.

[3] Harvard Bulletins in Education. No. 4, p. 25.

vinced that vocational guidance in its psychological aspects must be regarded as a *monitory* process. He says:

> When asked for a tenable view of vocational guidance, the scientist can do no better at present than to regard it as a monitory process. This has as its aim to secure an inventory of the individual by scientific measurements, and to warn him of his powers and limitations. Upon this as a basis, then, the individual may set out to develop himself. Thus vocational guidance does not commit a person inalienably to a single vocational possibility. It sets no bounds upon his achievement, but encourages him to develop himself to the highest degree.

The National Education Association report, elsewhere mentioned, indorses this view.

The interest of business efficiency experts in the vocational guidance movement has direct bearing for the public schools. Of the 58 business concerns reporting to the committee on vocational guidance of the National Association of Corporation Schools in 1915, three declared that they used in part tests based upon phrenology, six used tests of "physiognomy," and six made some use of psychological tests.[1] Several concerns reported that they were seriously considering the introduction of psychological tests for the selection of employees.

Dean Schneider, of the University of Cincinnati, worked out a series of "major characteristics" for use in selecting men in his cooperative experiment that has drawn the fire of both groups, those opposed and those favoring analysis of one sort or another. Dean Schneider, after trial, rejected both the examination of physical characteristics and the tests of experimental psychcologists. His list of characteristis developed, he asserts, out of the "old-fashioned plan of trying a man on the job without any previous examination of any kind." It is precisely this classification on the basis of types that is anathema to Brewer and others.[2]

Those who are inclined to dismiss without consideration the claims either of observational analysis or psychology need to be reminded that 28 psychologists have reported to the American Psychological Association that they are applying some form of psychological tests to the problem of vocational guidance in business efficiency,[3] that 30 large industrial organizations are now financing a five-year experiment to find out whether or not mental tests and the methods of applied psychology really have any value in helping employment managers to determine in advance the likelihood of success of the applicant for the position;[4] and that the United States Army has

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[1] Experience with questionnaires suggests that several of those who reply "yes" to these questions probably did not understand their import.

[2] The "averaged-opinion" plan of Atlanta is of this type. See bibliography, under Halsey, G. D.

[3] Ann. Psych. Assn. Rept. Com. on Acad. Status of Psychology, p. 33.

[4] Monthly Review of U. S. Bureau of Labor Statistics, 4: 580, April, 1917.

adopted as part of its war program occupational selection on the basis of psychological tests.[1]

VOCATIONAL GUIDANCE IN RELATION TO GENERAL EDUCATIONAL PROGRESS.

Vocational guidance is necessarily bound up with certain recent movements, such as vocational training, prevocational education, continuation school work, the cooperative plan of half-time work, the Gary plan, and the junior high school. As has been repeatedly pointed out in recent years,[2] the school itself is a guiding institution, and the modifications here listed are all intended to operate to make more efficient or more equable the selective function of the school.

Vocational education.—The vocational education movement is premised on the guidance function of education. It seeks to prepare pupils for efficient service in many occupations, instead of a few. The public school of the nineteenth century directed into the professions those who were able to remain and would profit by its restricted curricula, and, through early elimination, just as definitely directed into industry those who were not financially able to continue or did not take kindly to the traditional studies. Vocational training aims to recruit industrial workers more intelligently, more effectively, and more humanly. The greater the variety of occupational training, the greater the possibility of intelligent choice of vocation.

The rural school in the United States offers the most striking example of the school operating as a selective agency. For years American rural schools have been guiding boys and girls away from the land and toward the city. Modeling its course of study and methods on urban schools, using teachers city-bred and city-minded, speaking the language of the city streets rather than that of the country lanes, the rural school steered boys and girls away from the farms and into city employment just as effectively as if it had stood them up and counted them out. The introduction of vocational agriculture has done something, but still not much, to stem the tide. At the present time some of the rural high schools are just coming to a realization of the problems of employment. Others are still quite unawake to the fact that, even if it is desirable that the rural

[1] Official Bulletin, February, 1918; also in Vocational Guidance Bulletin, February-March, 1918.

[2] Robbins. The school as a social institution (Boston, New York, Allyn and Bacon, 1918): "When we speak of the school as a selective agency, we mean that it acts as a huge sifting machine in such a manner as to choose for higher educational preferment those who are adapted to its character. Under the old aristocratic ideal of education the school sifted out a certain few who were by that process of selection chosen to go forward and carry on the work of leadership in the professions, in the church, and to a certain extent in politics; while those who were eliminated from the school or who were never attracted within its walls were as definitely selected for the workaday tasks of the world."

high school shall direct its pupils to the farms, it can only safely do so through a complete survey of all vocations; so that the farm boy, if he chooses to remain on the farm, will do so because he has looked over the field and knows how important and desirable an occupation agriculture is. "This is a rural community; there is therefore no need for vocational guidance," is the substance of too many of the replies recently received by the Bureau of Education to a questionnaire to high schools; or the point is made that the boys can get all the jobs they want, so there is no need for the school to interfere. Here, of course is where the school is most needed. It can, and should, discriminate most carefully between worthy and unworthy farm employments, and it should supervise the work after it has begun, requiring regular reports from the students.

Prevocational training.—The discovery of the early elimination of pupils from school led to a modified type of education for boys and girls close to the compulsory education period who had tired of the "regular" school work or were unsuccessful in it.[1] So-called "opportunity schools" sprang up, designed to furnish practical education of the type perhaps best exemplified in Hampton Institute. At first the instruction given in these schools was simply general "industrial work," as it was termed. The term "prevocational" came into use when it began to be realized that, while it was neither practicable nor desirable to give specific vocational training to very immature boys and girls, it was quite possible and wholly desirable to give boys and girls, not merely the hand training that should form an integral part of all education, but practical experience in a number of type occupations that might even come to be "trial courses in vocational guidance." Such were the Ettinger schools of New York City, which gave boys and girls the chance to try, each for a limited period, a series of occupations, such as electric wiring, printing, woodworking, millinery, and novelty work. The theory underlying this work is not to train boys to be electricians and printers, or girls to be milliners or dressmakers, but to furnish an insight into all occupations and facilitate intelligent choice of a vocation.

The weakness in the demand for prevocational education lies chiefly in the fact that too often it is suggested as designed for those who have failed in the "regular school work," or, worse still, for those who are destined to do the "menial work" of the world.

Modern social opinion rightly regards such an attitude as dangerous to democratic ideals. The kind of training given in prevocational classes is essential for all boys and girls, and not merely for those who are to render service in what some of us still call undemocratically the lower walks of life. Boys and girls who are going on

[1] See Leavitt and Brown. Prevocational Education.

into the professions need prevocational training more, if anything, than those whose schooling terminates early. They need, above all, the knowledge of the basic occupations that prevocational work with the tools and materials of civilization gives, in order that they may properly understand a social organization based on service. Our whole democracy is based on the theory that this is a world of work, where each one does his part, and where it is essential that each one understand the other's part.

In a sense, of course, the use of the term "prevocational" is objectionable, since the fundamental need is not merely for courses of this nature in the upper elementary grades, but for a kind of education that shall, from the lowest grades in the school to the highest, be based on human occupations.[1]

Continuation schools.—The continuation school, in its provision of general education and special training for those already employed, especially boys and girls 14 to 18 years of age, furnishes valuable vocational guidance to a group that needs it most. Recent writers have emphasized that vocational decision is not irrevocable; that there must usually be rechoice of a vocation. This rechoice is often made possible by the continuation schooling now effective in five States.[2] In a report on continuation work in Boston, R. O. Small[3] showed that the continuation school, as a public eudcational agency, prevented drifting in industry, reduced the number of juvenile misfits by helping minors to make a more intelligent choice of occupation, and advanced young workers from unskilled to skilled trades. He cited 43 cases of boys and girls who have received guidance through the continuation school. The following cases are typical:

Printing.—A boy was an usher in a theater. He was thoroughly disgusted with his work, and at first his attitude in class was far from satisfactory to his teachers. He was placed with a printing company and entered the class in printing. He did good work. Later he was employed by another printing concern, and is now employed in the printing department of a third concern, where he is receiving a wage that is remarkable for a boy of his age.

Woodworking.—A bright boy attending the woodworking department at the continuation school was an errand boy at a public market. He came to the continuation school with no trade knowledge, but with a desire to become a pattern maker. During a follow-up visit, the teacher learned of a chance for an apprentice. The teacher liked this boy's work and recommended him for the position, which he secured. He is making good on his job.

Office work.—A girl was working in a factory when she entered the continuation school on November 7, 1916. She was visited by one of the teachers, who

[1] Using occupations in the broadest sense, i. e., "an occupation is a continuous activity having a purpose." (Dewey. Democracy and Education, p. 361.)

[2] Wisconsin, New York, New Jersey, Ohio, Pennsylvania.

[3] National Society for the Promotion of Industrial Education, Proceedings of the Indianapolis meeting, 1917.

found that her employer would take her into his office if the continuation school teachers would help her in filing, etc. She was transferred to the office practice class, and two weeks ago her employer took her into the office. She has asked for practice on the adding machine, because it would be of help to her in her work.

The cooperative half-time plan.—Try-out in the industry is one of the advantages claimed for the cooperative plan of vocational training whereby students spend alternate periods (usually weekly or fortnightly) in school and shop. In his description of the University of Cincinnati plan, from which the public high-school cooperative systems have in the main been derived, Prof. Park gives "the selection of workers" as one of the two most important elements.[1] Cooperative courses in New York City high schools have been arranged with mail-order houses, department stores, machine shops, railroads, automobile factories, printing offices, electric light and power companies, and several other branches of industry. Recently Richmond, Va., has undertaken a cooperative plan with street-car companies for part-time employment of high-school boys as conductors and motormen. Efforts have also been made to apply the principle to agriculture, particularly through the home-project plan. From the point of view of vocational guidance, the cooperative plan provides a "laboratory of industrial environment" that produces both training and guidance.

Employment in out-of-school hours.—The vocational guidance possibilities of work before and after school, on Saturdays, and during summer vacations are just beginning to be realized. This is a field that has usually gone quite without recognition by the school authorities, though recent investigations have shown that in the aggregate the amount of out-of-school work done by school children, even in the lower grades, is considerable, and its effect, favorable or unfavorable, on future careers must be very important.[2] The school in its vocational guidance function is concerned in this problem from several points of view. The school needs to know at all times what the pupils are doing. Excessive work outside of school is often injurious to the pupil and an embarrassment to his progress in school. A recent English report says:

> These inquiries have established the fact that not only are children largely employed for long hours at wages that are not commensurate with the services rendered, but also that, in the majority of cases, the energy of the children so employed is drained to the point of injuring their chances of making the best use of their lessons at school.

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[1] U. S. Bu. of Educ., Bul., 1916, No. 37.

[2] Jarvis found (U. S. Bu. of Educ., Bul., 1917, No. 20), that of 14,391 children investigated, 5,181 were employed during summer vacation and 3,864 during out-of-school hours throughout the school year. Mrs. Reed's study of Seattle newsboys showed that many high-grade boys were handling papers and magazines, and receiving some very specific direction toward salesmanship as a future career.

The boy who drives a milk-wagon route before school or delivers newspapers morning and evening may or may not be doing something from which he will benefit later in life. As often as not he may be getting impressions of some forms of work that will effectively drive him from them.[1] It is the school's business to have a record of this out-of-school activity, to supervise it, at least informally, and to utilize it directly in vocational guidance.

Summer vacation employment is still more direct in its possibilities for vocational guidance. Many school boys have had valuable "try-out" courses by working in stores and offices, or on the farm, during the summer. Surprisingly little effort has as yet been made to utilize this obvious opportunity for guidance.[2] The difficulty has been, on the one hand, that business did not care to bother training young people who were only temporary, and, on the other hand, that the schools have generally not realized their responsibility and opportunity in this summer work. Colleges and universities and certain types of private institutions[3] have long been making a special study of the summer employment of their students, but the public schools have almost uniformly pursued a laissez-faire policy with regard to this as well as other outside activities of their pupils.

The war, with its enormous stimulus of the demand for labor, has changed all this. All these untapped labor resources are now given careful consideration, and the school has a responsibility for supervision and guidance that can not be disregarded. The work of the United States Boys' Working Reserve[4] is a sincere attempt to meet this responsibility, and many schools are coming to see in it an opportunity for guidance of the most practical sort. Through the reserve large numbers of city boys, after receiving necessary preliminary training, are going to the farms. These are boys who would in all likelihood never have otherwise an insight into rural life. Possibly only a small proportion of these boys will be permanently attracted to farming as a life work, but all of them will learn at first hand something of the significance of agriculture as the world's basic industry—a form of vocational enlightenment with regard to the other fellow's occupation that is only less necessary for efficient citizenship than information respecting one's own choice of employment. Similarly, the United States School Garden Army,

[1] Cohen found in his study of vocational ambitions of eighth-grade boys (Current Education, February, 1918) that the boys never saw any connection between this out-of-school employment and their future occupations. Indeed, they usually desired to do something as different as possible from what they had been doing to earn money.

[2] The Cincinnati cooperative plan uses the summer after high-school graduation as a try-out period.

[3] Hampton Institute, for example.

[4] The Boys' Working Reserve has recently extended its interest in a significant way to assist boys planning to go into war-essential industry. Under the new plan boys will be urged to continue their education, if not full-time at least part-time, in connection with their employment.

organized as a war measure among the school children of the towns and villages, promises to become a permanent agency for education and vocational direction.

The schools are learning to utilize a host of new forces that have important bearings upon the future careers of boys and girls. Home visiting by teachers; student activities of all kinds; athletics; student self-government; camps; boys' and girls' clubs; scouting; the Junior Red Cross; war savings societies; home gardens; and any other of the war activities that answer fundamental educational needs—all of these will have increasing significance for vocational guidance as the public school comes to recognize their importance for education.

Closely related in its import for vocational guidance is the plan of school credit for outside work. Recognition of private music lessons, for example, may sometimes mean keeping in school a pupil whose interests are preeminently musical. The school can utilize this outside interest in vocational direction, advising necessary academic or professional education in the case of a pupil who may be looking forward to music-teaching and suggesting desirable school subjects that might most profitably work in with the music interest. This is the kind of guidance that can be safely and wisely intrusted to a sympathetic teacher who knows the real world of occupations.

The Gary plan.—Certain features of the work-study-play plan put into effect by Wirt in Gary and tried in many other places are based upon the principle of education through occupations, and involve vocational guidance. The object is to acquaint all children with the fundamental tools, materials, and processes, so that opportunity for choice of an occupation is broadened, and the possibilities of going on with specific vocational training for industry are increased. Prominent among the claims made for Gary by its advocates is that of "economical, efficient, vocational guidance for all." Mr. Wirt asserts that his plan keeps children in school longer, directs more students into technical institutes, and in general operates on the theory that "vocational guidance is the first consideration and vocational training only secondary."[1]

The junior high school.—Differentiation of school courses at the strategic period of early adolescence is one of the aims of the junior high school, which represents the attempt to reorganize the American educational system on the basis of six years of elementary school and six years of high school. It is at this period of differentiation in courses that certain kinds of guidance are most needed and can be most effectively given. It is at this period that the life-career class, for the study of vocations, can be made most significant and helpful. Prevocational courses, by whatever name they may be known, belong in this junior high-school period, but, as noted on

[1] U. B. Bu. of Educ., Bul., 1916, No. 1, p. 64.

page 16, they should be furnished to all pupils and not merely to those who expect to leave school soon after the compulsory age. The junior high school makes it possible to keep more boys and girls in school for an additional year beyond the eighth grade, performing in this one particular an important function in guidance. Reorganization on the basis of six-three-three may therefore be considered an administrative device of positive value for vocational guidance.

PLACEMENT.

One effect of the emphasis upon vocational guidance as a movement affecting all education has been to create a prejudice in the minds of some workers against placement work in connection with vocational guidance. Repeated warnings have been sounded against a conception of vocational guidance which would merely strive to get jobs for children, and it must be said that the accumulated information at hand about the jobs available, as revealed in the studies reviewed later in this report,[1] excuses, if it does not justify, hostility toward anything that looks like the creation of mere employment bureaus for the marketing of children's services.[2] But to wave aside the remarkable work represented in Federal, State, and city labor bureaus, is to detach from the vocational guidance movement one of the most important points of contact it has with industrial life. Placement work will go on, and the only question for the vocational guidance movement to decide is whether or not it will seek to utilize an agency of growing importance and effectiveness. Somebody will do placement work; it is very important, if possible, that it be done by the school or some other agency more interested in the child than in the industry, and that it be done with as many of the elements of intelligent vocational direction as possible.

Particularly significant in this connection is the employment work now going on in New York City. Throughout New York State the law has made possible a chain of public employment offices that represent to a large extent a new departure in labor distribution in the United States.[3] In New York City particularly high ideals have been set; those dealing with juveniles have determined that no person under 18 years of age shall be directed to any place of employment until it has been investigated.[4] A bureau of information has been established to centralize the investigation of all places of employment for agencies, schools, and vocational guidance associations before young

[1] See especially pp. 40 and 49.

[2] The English experience during the war is especially significant in this respect. See Chapter VII.

[3] A critical survey of the situation from the worker's point of view is given in Bureau Publication No. 17 of the Children's Bureau, "Working Certificate in New York State." Washington, Government Printing Office, 1917.

[4] This is also true of Cleveland, Ohio.

people are sent to work.[1] Furthermore, it should be noted that those in charge of this work are for the most part men and women whose training, past experience, and sympathies lie in the field of vocational guidance and other forms of social work.

It seems clear that, while placement is but one phase of the vocational guidance movement, it is a highly important phase, and one which the school and vocational guidance workers can not afford to neglect. Vocational guidance is primarily a coordinating movement, and placement work can and should be embraced in it.

[1] From information furnished by Louise C. Odencrantz, superintendent of the women's department of the New York City office of the State Industrial Commission.

II. THE VOCATIONAL GUIDANCE MOVEMENT.

HISTORICAL DEVELOPMENT.

Writers on vocational guidance are fond of pointing out that, while the term "vocational guidance" is new, the thing for which it stands is as old as society itself.[1] This is merely to say that there has always been some kind of an organization of occupations and some effort to direct persons into employment. In some forms of society the routing of youth into occupations has, of course, been notoriously narrow and restrictive. This is the chief reason for the popular objection to prescription of vocation in a democracy. It is, on the other hand, largely because of the breakdown of the older caste systems and forms of apprenticeship that democracy finds it imperative to seek some desirable means of distributing human service.

While the history of industry and occupations is a long one, therefore, the history of vocational guidance as it is known to-day is a very recent matter. It dates practically from 1908, when Prof. Frank Parsons established the Boston Vocation Bureau. Prof. Parson's book, "Choosing a Vocation," was published after his death, in 1909. The story of the Boston bureau is told by him in two articles in the Arena for July and September, 1908. In order that the genesis of the movement may be clearly understood, several of the most significant paragraphs are quoted:

> The bureau was founded in January of this year (1908) by Mrs. Quincy A. Shaw, on plans drawn up by the writer. More than a dozen years ago I stated the essence of the matter in a lecture on "The Ideal City." That lecture was repeated in Boston before the Economic Club a few years ago, and soon after Mr. Meyer Bloomfield and Mr. Philip Davis, on behalf of the Civil Service House, invited me to speak to the graduating class of one of the evening high schools on the choice of a vocation. After the talk a number of young men asked for personal interviews, and the results proved to be so helpful that Mr. Bloomfield requested me to draw plans for the permanent organization of the work. Leisure came this fall to do it; the plans were submitted to Mrs. Shaw, who heartily approved the idea and immediately established the new

[1] Bloomfield prefaces his Readings with a facsimile of the title page of an eighteenth century book on vocations. Brewer cites a passage in Pascal (1670) as emphasizing the importance of a wise choice of vocation. Plato's Republic is often referred to as one of the earliest recorded plans for vocational guidance. School responsibility for guidance through apprenticeship is implicit in the Massachusetts education act of 1647.

institution with sufficient resources to enable the work to be begun with facility and success.

Although the work is very young and a good deal of its life has been consumed in the process of organization, more than 120 young men and women from 15 to 72 years of age have come to us for consultation, and, according to their own spontaneous statements, all but 2 have received much light and help, some even declaring that the interview with the counselor was the most important hour of their lives. Among the applicants have been Harvard seniors, students from Dartmouth and other neighboring colleges, a number of college graduates, young men in commercial and business life, and some older ones, including an ex-bank president of splendid ability and a traveling salesman who at one time made sales amounting to $200,000 in a year.

The majority of the applicants, however, have been boys and girls from the high schools or working boys and girls of about the same age.

The applicants are of two classes: First, those having well-developed aptitudes and interests and a practical basis for a reasonable conclusion in respect to the choice of a vocation; second, boys and girls with so little experience or manifestation of special aptitudes or interests that there is no basis yet for a wise decision. They are set to investigating different industries and practical testing of themselves to broaden their knowledge and bring to light and develop any special capacities, aptitudes, interests, and abilities that may lie dormant in them or be readily acquired by them.[1]

That Parsons realized fully the import of his experiment for general education is evident from a passage in the second of the two Arena articles:

In this plastic period of rapid growth, this age of brain and heart, society should guarantee to every child a thorough all-round development of body, mind, and character, and a careful planning of and adequate preparation for some occupation, for which, in the light of scientific testing and experiment, the youth seems best adapted, or as well adapted as to any other calling which is reasonably available. If this vital period is allowed to pass without the broad development and special training that belong to it, no amount of education in after years can ever redeem the loss. Not till society wakes up to its responsibilities and its privileges in this relation shall we be able to harvest more than a fraction of our human resources, or develop and utilize the genius and ability that are latent in each new generation. When that time does come, education will become the leading industry, and a vocation bureau in effect will be a part of the public-school system in every community—a bureau provided with every facility that science can devise for the testing of the senses and capacities, and the whole physical, intellectual, and emotional make-up of the child, and with experts trained as carefully for the work as men are trained to-day for medicine or the law.[2]

SPREAD OF THE MOVEMENT.

The work of the Boston Vocation Bureau soon became widely known. Out of it grew the first National Conference on Vocational Guidance (Boston, 1910), followed by similar conferences at New York (1912), Grand Rapids (1913), and the National Vocational

[1] Parsons, Frank. "The vocation bureau." The Arena, 40: 3, 5–6, July, 1908.
[2] Arena, 40: 183, September, 1908.

Guidance Association, which held meetings at Richmond, Va. (1914), Oakland, Cal. (1915), Detroit, Mich. (1916), Philadelphia, Pa. (1917), and Atlantic City, N. J. (1918). As a direct result of the work of the Vocation Bureau came the organized development in the Boston public school system and surrounding communities.[1]

At about the same time the Boston work was getting started a group of New York teachers were doing pioneer work with high-school boys and girls. By 1909 it was possible for Mr. E. W. Weaver, chairman of the students' aid committee of the High-School Teachers' Association, to report that—

> There are now in all the day and evening high schools of New York City special committees whose aim it is to aid deserving students to secure employment during vacations and for out-of-school hours in order to earn a part of their support; to advise those who are ready to leave school, and others who are compelled to leave school, in the choice of a vocation; to direct them how best to fit themselves for their chosen vocation and to assist them in securing employment which will lead to success in those vocations.[2]

The same report pointed out that the work in New York City had passed the experimental stage, and it therefore asked that (1) the vocational officers of the large high schools be allowed at least one extra period of unassigned time to attend to this work; (2) that they be provided with facilities for keeping records of students and employment; and (3) that they have opportunities for holding conferences with students and employers.

The problem was attacked from quite another angle by Grand Rapids, Mich., where Jesse B. Davis inaugurated a plan of teaching a knowledge of vocations through the regular courses in English. Little noticed at first, this method has had a remarkable influence, especially in interesting teachers in occupational problems and placing the task of vocational guidance directly upon the public schools.

The 1910 report of the Commissioner of Labor reviewed the progress of the vocational guidance movement in a lengthy chapter.[3] The New York and Boston work is described and the Boston conference, November 15–16, 1910, is referred to as evidence of the force of the movement. Liberal quotations are given from the New York pamphlets on choosing a career; the placement work is described in some detail; and the plan for a central bureau outlined by the New York committee is given in full. In connection with the Boston work the vocation bureau is described, and special attention is given to the investigations of occupations. Three of the bulletins of the

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[1] The most complete statement of the Boston development is in Brewer. Vocational Guidance Movements, pp. 22–37.

[2] Report of the work of the students' aid committee of the High-School Teachers' Association of New York City, May 15, 1909, p. 5.

[3] Department of Commerce and Labor, 25th An. Rept., Ch. XV; "Vocational Guidance," pp. 411–497.

bureau, dealing with "The Machinist," "The Baker," and "The Architect," are reproduced in full to illustrate the type of information furnished. The official school beginnings in Boston are described, together with the work of the Boston Home and School Association, the Girls' Trade Education League, and the Women's Municipal League. Several of the vocational pamphlets issued by the Girls' Trade Education League are reproduced,[1] and the charts on opportunities for training prepared by the educational department of the Women's Municipal League are presented. The report names seven cities where vocational guidance has been undertaken, pointing out that, whereas in some cities, as New York, the work developed from attempts to place pupils, in others, notably Boston, "the features of guidance and counsel have from the first been prominent."

YOUTH AND INDUSTRY.

Following these attempts at vocational guidance came a period of investigation of the juvenile entrants into industry. Between 1911 and 1913 a number of such studies are recorded. With the report of the Massachusetts Commission on Industrial and Technical Education as a background, Somerville, Worcester, and Cambridge, Mass., made special studies in 1911 of the problem of school leaving as related to employment. The Hartford (Conn.) vocational guidance committee made a study of conditions in Hartford the same year, and similar investigations were made the following year in Philadelphia, New York, Cincinnati, Chicago, and St. Louis. This particular type of investigation extended to Des Moines, in 1914, Seattle, 1914, and New Orleans, 1914, when it practically stopped, though some of the records, notably those in Cincinnati, Chicago, and Seattle, extend down as far as 1916.[2]

Some kind of a vocational guidance program resulted in every one of the cities that had studies of school leaving, and permanent organization was effected in several instances. By April, 1914, approximately 100 public high schools, representing some 40 cities, were reported to the Bureau of Education as having definitely organized conscious plans of vocational guidance, through vocation bureaus, consultation committees, trial vocational courses, or regular courses in vocations.[3] Influence of the movement was observable in the fact that Philadelphia's new official was director of "vocational education and guidance," and in Minneapolis the division of "attendance and vocational guidance" was created.

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[1] Dressmaking, Millinery, Bookbinding.

[2] The Children's Bureau report on Watham, Mass., though published late in 1917, describes an investigation made originally in 1914.

[3] An. Rept. U. S. Commis. of Ed., 1914, p. 11.

VOCATIONAL GUIDANCE IN THE NATIONAL ASSOCIATIONS.

Besides the National Vocational Guidance Association, the movement enlisted the interest of such organizations as the National Society for the Promotion of Industrial Education,[2] which has always had vocational guidance as one of its chief concerns; the National Education Association, with its committee on vocational education and vocational guidance; the National Association of Corporation Schools, which devoted a large part of its 1915 meeting to the comprehensive report of a committee on vocational guidance; and still more recently the National Employment Managers' Conference, which is a direct outgrowth of the vocational guidance movement, typifying the emphasis on the newly discovered problem of vocational guidance in the industries. The local vocational guidance committees were followed in some instances by the city and State organizations, such as the Vocational Guidance Association of Brooklyn, the Vocational Guidance Association of New York, and the California Vocational Guidance Association, a very active organization in a State that is deeply interested in the problems of vocational direction.

In the sections that follow, brief statements are given covering the activities of the more important national educational organizations that have concerned themselves more or less directly with vocational guidance.

NATIONAL VOCATIONAL GUIDANCE ASSOCIATION.

The Boston conference on vocational guidance (1910)[2] held under the joint auspices of the Vocation Bureau and the Chamber of Commerce of Boston, was largely given over to statements of the need for vocational guidance. Addresses were made by Prof. Paul H. Hanus, Harvard University; Frederick P. Fish; Bernard J. Rothwell; Robert A. Woods, of South End House, Boston; David Snedden, then State commissioner of education for Massachusetts; Charles Zueblin; Prof. Frank M. Leavitt, University of Chicago; Owen Lovejoy, of the National Child Labor Committee; President Richard M. Maclaurin, of the Massachusetts Institute of Technology; Felix Adler, of the Ethical Culture School, New York; Stratton D. Brooks, at that time superintendent of schools in Boston; Meyer Bloomfield; E. W. Weaver, Brooklyn, N. Y.; President Eliot, of Harvard; Samuel McCune Lindsay, New York; Miss Florence M. Marshall, director of the Girls' Trade Education League, Boston,

[1] Now the National Society of Vocational Education.

[2] The proceedings of this conference were never published. Several of the papers were printed in current periodicals, and a number of them are now available in Bloomfield's Readings. The account here given is based on the unpublished stenographic report of the conference, secured through the courtesy of the Boston Vocation Bureau.

and others. Supt. Brooks forecast much of the development that has come since when he expressed the need for "permeating public opinion and permeating the school life with the idea that the school is to prepare for a vocation and that vocation is to be wisely selected, as wisely selected as it is possible to select," and Mr. Bloomfield showed how the "vocational guidance movement seeks to come in as a cooperative, coordinating agency, tying up the various threads, the interests, the points of view, in order to give the child a cooperative help in its choice of a life work," and how "to the wisest employers and to the best teachers we ask that we strive eventually to give an educational motive to work and a vocational motive to education."

The sense of the conference is well summed up in the words of President Maclaurin:

> There can be no question at all of the importance of a right solution of this problem of vocational guidance. Whether we look at the individual or at society as a whole, the conditions are really deplorable. * * * There is much talk to-day, wise and otherwise, of preservation, of conservation, of our natural resources. There is waste on every hand, waste that could be easily avoided if we could only face the problem scientifically, seriously, and with definiteness of purpose. There is no waste, however, that is quite as distressing as the waste of human effort. If we can do anything to save this fearful waste, then I say that it is a national duty to take the matter up with all seriousness and do everything that we can.

The second conference[1] held in New York in 1912, was organized by the officers of the "Central Committee on Vocational Guidance of New York City," with the assistance of a conference committee. Progress in the movement is indicated by the increased attention given to reports of actual vocational guidance work. In the conference on placement Dr. Edward T. Devine pointed out that:

> We perhaps do not need, as we did a few years ago, to preach the idea of vocational guidance as essential. That idea is in the air. It may be that the time has come for us to put into practice the ideas that the pioneers in this field have been thinking out.

Mrs. P. J. O'Connell, superintendent of the Alliance Employment Bureau, described her experience in placing the unskilled girl worker. E. W. Weaver, chairman of the students' aid committee of the New York High School Teachers' Association, described the experience of his committee in attempting to get in touch with employers. Miss Anne Davis, of the Chicago School of Civics and Philanthropy, outlined the work of the "Bureau of Employment Supervision for Boys and Girls," then in existence a year and a half.[2] Miss Bertha M. Stevens, then director of the Cooperative Employment Bureau for Girls, Cleveland, Ohio, discussed the question, "Have we any right to place the average boy or girl in the average job?"

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[1] The proceedings were printed by the committee. See bibliography.

[2] See also p. 89 of this report.

In the conference on "Follow-up," presided over by Miss Alice P. Barrows, Dr. Edgar S. Barney told how the Hebrew Technical Institute kept in touch year after year with its graduates; George H. Chatfield, secretary of the Permanent Census Board of New York, pointed out how the records of 132,000 working children in New York City are handled by his organization; Mrs. Helen T. Woolley, of Cincinnati, discussed the work-certificate situation in Ohio and told something of her analysis of the 2,366 children who took out working certificates in 1911–12; and Miss Elsa Ueland, in summarizing, made clear that whether the placement bureau idea, the vocational counsellor idea, or the idea that the schools themselves needed to be guided, was of most importance, all involved some system of follow-up.

In the conference on study of occupations Dr. Edward L. Stevens suggested seven tests to which he would submit every occupation which employed boys and girls: (1) Is it healthful? (2) Is it an enduring occupation in trade? (3) Is it seasonal? (4) Is it moral? (5) Is there opportunity for promotion? (6) Is it educative in itself? (7) Does the employment make for a living wage? Charles R. Richards, director of Cooper Union, grouped the fundamental data necessary in studying the industries under three headings: (1) The economic data, (2) the opportunities presented by an occupation for beginners, (3) the relation of the occupation to school training. John A. Fitch urged constant investigation of the conditions of industry and wide publicity for the results. Mrs. Mary Schenck Woolman, president of the Women's Educational and Industrial Union, Boston, pointed to the experience of the Manhattan Trade School for Girls as evidence of the value of investigations of occupations. In her summary Miss Frances Perkins emphasized the need for study of the human factor in industry.

In the conference on vocational analysis Mrs. Woolley discussed the psychological laboratory as an adjunct to a vocational bureau; Dr. James E. Lough, of New York University, spoke hopefully of the possibilities of applying experimental psychology in vocational guidance; Gustave A. Blumenthal described vocational analysis as carried out in the West Side Young Men's Christian Association; and Miss Henrietta Rodman told of her course in the Wadleigh High School, New York, whereby the girls attempted to analyze their own aptitudes on the basis of Thorndike's classification of types of mind.

Other sessions discussed vocational scholarships, opportunities for vocational training as a phase of vocational guidance, methods of vocational direction, and the relation of vocational guidance to the employer.

The Grand Rapids (Mich.) conference, October 21–24, 1913, was the organization meeting of the association. In his prefatory state-

ment to the report of the meeting[1] Prof. Frank M. Leavitt pointed out that the new association was organized "only when a careful study of the situation had disclosed the fact that no existing organization was in a position to do the work to which the association proposes to address itself." He asserted that the demand for a more rational and humane guidance of the youth of the land toward and in vocational life came from three distinct sources—economic, educational, and social. The constitution adopted by the association provided:

> The objects of this association shall be to promote intercourse between those who are interested in vocational guidance; to give a stronger and more general impulse and more systematic direction to the study and practice of vocational guidance; to establish a center or centers for the distribution of information concerning the study and practice of vocational guidance; and to cooperate with the public schools and other agencies in the furtherance of these objects.

In December, 1914, the association met with the National Society for the Promotion of Industrial Education at Richmond, Va. Among the topics considered were: Practical phases of vocational guidance; the street and the start in life; dexterity and skill in relation to vocational guidance; vocational guidance in the university; vocational guidance in the public school system; vocational guidance and social welfare. Problems of vocational guidance were considered in special relation to the problems of vocational training as brought out in the cooperative vocational survey which had just been completed for the city of Richmond.

The meeting of the association at Oakland (1915), Detroit (1916), and Philadelphia (1917) were devoted largely to interchange of experience and reports of practical attempts to work out the theories of vocational guidance. The meeting at Oakland stimulated an already healthy interest in the subject in California that has persisted and expanded. The Detroit meeting, held in connection with the Department of Superintendence of the National Education Association, reemphasized the school's interest in vocational guidance. The Philadelphia meeting of April, 1917, was a joint meeting with the National Employment Managers' Conference, and indicated something of the rapprochement that is coming between the school and industry. The Atlantic City meeting, February, 1918, took the form of a conference on "war problems in vocational adjustment." Representatives of Government agencies engaged in prosecuting the war presented the plans that had been worked out for classifying personnel in the Army, for enlisting farm labor, and for reeducating and redirecting the disabled returned soldier.

Since April, 1915, the association has published a monthly bulletin, which gives in concise form accounts of new developments, re-

[1] U. S. Bu. of Educ., Bul., 1914, No. 14, p. 5.

ports from different centers, and reviews of the rapid developing literature of vocational guidance.

NATIONAL SOCIETY FOR THE PROMOTION OF INDUSTRIAL EDUCATION.

Since its inception (1907) the National Society for the Promotion of Industrial Education has had an interest in the problem of vocational guidance that has been second only to that of vocational training. In 1913 and 1914 the society held joint sessions with the National Vocational Guidance Association, and in general there has been sustained interest on the part of each organization regarding the essential relation between the two movements. The most definite contribution of the national society has been in the vocational surveys of Richmond, Va., Minneapolis, Minn., and the State of Indiana, referred to more in detail elsewhere in this report.[1] It has been pointed out that through these surveys the facts regarding occupations and processes are becoming known, an essential step in any plan of vocational guidance. With the passage of the Smith-Hughes Act granting Federal aid for vocational education, the society broadened its work and became the National Society for Vocational Education. It will have as sections or affiliated organizations many other societies in the vocational field, including the Vocational Guidance Association.

NATIONAL EDUCATION ASSOCIATION.

The National Education Association had in its annual programs already made several contributions to the vocational guidance movement before any of its committees began to investigate the subject. President Eliot's address at the 1910 meeting on "The Life Career Motive" has perhaps stimulated as much real thinking on the significance of vocational aim as any other single document in the history of the movement, and Supt. Spaulding's analysis of the problems set for vocational guidance, at the Cincinnati meeting of the Department of Superintendence (1915), is one of the constructive efforts in this field.[2]

At the Kansas City meeting of the Department of Superintendence (1917) a conference of superintendents in cities of between 10,000 and 25,000 population was held on the general topic "assisting pupils in the upper grammar grades to plan ahead." The conference discussed the methods of making prevocational work in smaller cities furnish something like an adequate basis for choice of vocation.

Apart from these activities the most important contributions so far made by the National Education Association to the vocational guidance movement are to be found in the work of the committee on

[1] See page 70. [2] See page 11.

vocational education and guidance, appointed at the 1913 meeting, and the Commission on the Reorganization of Secondary Education. The committee on vocational education has issued several reports, the latest and most comprehensive having been published as Bulletin No. 21, 1916, of the Bureau of Education.[1] This report contains a brief but well-organized statement of the aims of vocational guidance work in public high schools. The reports of the Commission on the Reorganization of Secondary Education are important in this survey, not only because one of them deals with vocational guidance, but because the idea of the junior high school and the curricula readjustment involved in better vocational guidance lie at the basis of the recommendations of the commission in all subjects.

The final version of the report on "Vocational Guidance in Secondary Education" (Educ. Bul., 1918, No. 19) deals primarily with the needs of youth between 12 and 18 years of age, whether in school or at work. The point is made, however, that the ideals of vocational guidance can not be satisfactorily attained without remodeling the instruction of the first six school years; that elementary education should be so organized as to give some knowledge of occupations and afford opportunity for a wide variety of experience in activities having vocational significance, and that changes should be effected in the elementary school program, and every effort made to lead pupils, parents, and employers to realize the importance of longer schooling.

The report attempts to group pupils by the time of leaving school. For the first group, those leaving school at the termination of the compulsory age limit, 14 years, "employment supervision" is designated. For the second group, those who will remain in school from four to six years beyond the sixth grade, but who will not enter higher institutions, such help as "guidance in choice of curriculum," "vocational information," and "placement" are suggested; and the point is made that "the value of vocational information and placement will be enhanced many times by the presence in the junior high school of prevocational work, and in the senior high school, curriculums with genuine vocational content." For the third group, those on the way to higher educational institutions, the special duty of the secondary school is guidance in the choice of courses, both in the secondary school and in the higher institution. The report considers vocational information as perhaps the most important phase of vocational guidance at present conducted in the four-year high school. The possibilities of work in English and civics are referred to briefly.[2]

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[1] Vocational Secondary Education.

[2] See also U. S. Bu. of Educ., Bul., 1917, No. 2; also Bul., 1915, No. 28.

A vocational guidance program.—As a reasonable and comprehensive vocational guidance problem for the secondary period, *i. e.*, 12 to 18 years, the report recommends the following:

1. Survey of the world's work.
2. Studying and testing pupils' possibilities.
3. Guidance in choice and rechoice of vocation.
4. Guidance in reference to preparation for vocation.
5. Guidance in entering upon work, that is, "placement."
6. Guidance in employment, that is, "employment supervision."
7. Progressive modification of school practices.
8. Progressive modification of economic conditions.

NATIONAL ASSOCIATION OF CORPORATION SCHOOLS.

The interest of business men in vocational guidance is illustrated by the National Association of Corporation Schools. On September 1, 1914, the executive committee of this association appointed a committee[1] on vocational guidance and instructed it "(1) to make a scientific study of the subject of vocational guidance, (2) to compile available data, (3) to make a digest of such data, and (4) to submit recommendations in a report to be made at the third annual convention."

The report presented at the Worcester meeting, June 8–11, 1915,[2] comprised 72 pages and covered the following topics:

I. Some scientific aspects of vocational guidance.
II. Survey of available helpful vocational guidance data.
III. Charting practicable opportunities.
IV. Recommendations.
V. Bibliography.

The foreword of the report sets forth the committee's understanding of the business man's interest in the vocational guidance movement. The committee points out that "the first uncharted sea scientific management has discovered is our general ignorance of the content and potentiality of the human and of truly scientific right relations between those who work and those who hire." The "tremendous human turnover" characteristic of the industrial régime is described, and the assertion is made that:

> This frightful waste in the turnover is due fundamentally to the lack of knowledge regarding the generality and versatility of human talents, to the lack of adequate training before and after entering industry, to the lack of proper employment plans, and scientific work selection, and to the lack of definite knowledge of work conditions.

[1] The committee consisted of Prof. Henry C. Metcalf, Tufts College, Mass., chairman; Dr. Walter Dill Scott, Northwestern University; and Albert C Vinal, of the American Telegraph & Telephone Co.

[2] The National Association of Corporation Schools. Third annual convention. Papers, reports, bibliographies, and discussions The Trow Press, N. Y., 1915. The material on vocational guidance comprises pp. 330–478.

In the judgment of the committee—

More comprehensively than any other movement, vocational guidance takes for its supreme function the conservation of human energy, the eradication of the industrial waste; and no elaboration of this waste is necessary for an understanding of its enormity.

Vocational guidance forces us to comprehend the physical, intellectual, and moral worth of each worker; * * * it forces us to consider education and economic opportunity as one and inseparable. Through vocational guidance business and education are united in the great problem of the conservation of human resources.

Under scientific aspects of vocational guidance the report treats of the far-reaching influence of the work environment, the possibility of the employer as "vocational guide," and the generality and versatility of human talents.

An attempt is made to "take stock" of the vocational guidance movement as it affects commercial bodies and to find out what methods developed by it could be utilized by the association in working out its own problems. Work done by chambers of commerce and boards of trade is referred to by typical cases (especially Buffalo and Rochester). A miscellaneous list of surveys—"vocational, industrial, and occupational"—is given, but the field here also was obviously so broad that the only significance of the list is to give some quantitative idea of the survey movement. A partial list of bureaus of vocational guidance is given, with the notation that "for the most part these are maintained between the public schools and the commercial interests."

One of the most significant sections of the report is that dealing with the activities of the members of the National Association of Corporation Schools.[1] Replies were obtained and tabulated from 58 concerns on the basis of an elaborate questionnaire.

The committee recommends to the attention of the association the preparation of a special digest of the material on vocational guidance and a further study of the following topics: Sources of supply of employees; best methods of cooperation between business and vocation bureaus; what commercial organizations are doing in behalf of vocational guidance; how the National Association of Corporation Schools can best assist educational and industrial surveys; the psychological influences of different systems of remuneration.

NATIONAL CONFERENCE OF EMPLOYMENT MANAGERS.

In 1913 the Boston Vocation Bureau brought together 50 of the men who do the hiring of employees in large business and manufacturing concerns of Boston and vicinity, to consider the better selection and guidance of working youth. The organization known as the Employment Managers' Association resulted. By April, 1917, there were 50 such associations in cities throughout the country, and four

[1] See pp. 390–410 of the report.

national conferences had been held.[1] The conference at Philadelphia, April 2–4, 1917, discussed the following topics, among others: The cost of labor turnover; methods of reducing labor turnover; what the employment department should be in industry; the work of the Carnegie Institute of Technology in developing tests; analysis of reasons for leaving; following up after hiring; individuality in industry.[2]

AMERICAN FEDERATION OF LABOR.

For many years the American Federation of Labor has been interested in vocational education and vocational guidance. The federation was one of the first national organizations to issue an official pronouncement on vocational training for workers, and since 1903 it has had committees actively at work in this field. It has consistently stood for industrial training through public, rather than private agencies, and has opposed any attempt at a narrowing type of training that would withhold from the sons and daughters of workers the opportunity for further education and the full and free choice of vocation.

More recently the federation has emphasized the importance of the vocational guidance viewpoint in any plan of education. At the convention held in Minneapolis in June, 1918, the following statements, among others, were adopted as part of a national education program to which the organization placed itself:

1. The development of vocational guidance and industrial education in both urban and rural communities, in proper relation to each other and to the needs of our democracy.

2. The provision of increased facilities in public normal schools for men and women in the trades who desire to prepare themselves for teaching industrial and vocational subjects.

3. The insistence that in all courses of study, and particularly in industrial and vocational courses, the privileges and obligations of intelligent citizenship must be taught vigorously and effectively; and that at least in all vocational and industrial courses, an unemasculated industrial history must be taught, which shall include an accurate account of the organization of the workers and of the results thereof, and shall also include a summary of all legislation, both State and Federal, affecting the industries taught.

OTHER ASSOCIATIONS.

A number of other organizations have done important work for the vocational guidance movement.[3] Conspicuously practical work in

[1] The proceedings of the Minneapolis meeting (January, 1916) were published as Bul. 196 of the Bureau of Labor Statistics, and the proceedings of the Boston meeting (May, 1916) were printed as Bul. 202 of the same bureau. See Monthly Review of the Bureau of Labor Statistics, April, 1917.

[2] The periodical, "Industrial Management" (formerly Engineering Magazine), New York, has published articles dealing with this movement. See especially series beginning in issue of January, 1917.

[3] An attempt is made on p. 388 of the Corporation Schools Report (1915) to list some of the associations immediately concerned.

organizing vocational conferences for college women and in placement work for members of this special group has been done by the Association of Collegiate Alumnae.[1] The American Association on Unemployment has approached the problem with a constructive program of labor adjustment.[2] The Young Men's Christian Association, besides maintaining vocation bureaus in some of the larger centers, has recently mapped out a plan of vocational direction that provides for grade-school boys, high-school boys, and boys already at work.[3] The Young Women's Christian Association has investigated conditions in certain occupations for women.[4]

Nearly every professional organization is interested in vocational guidance problems for its special field. The American Home Economics Association has cooperated in an investigation of the requirements and opportunities for home economics teaching.[5] The League of Nursing Education has sought close affiliation from the start with the vocational guidance movement, because of the special difficulty of the "misfit" in the profession of nursing. The medical associations have been concerned with occupational diseases, an important element in the developing fact-basis for vocational guidance.[6]

RECENT GROWTH.

In April, 1918, the Bureau of Education sent a post card inquiry to the 10,400 four-year high schools in the United States, requesting data on "departments or bureaus designed to assist young persons in securing employment." The object was to secure definite information, for war use, as to the extent of placement work in public high schools. Of the 5,628 schools replying, 932 reported vocation bureaus, employment departments, or similar devices for placing pupils.

A number of the schools added a word or two to indicate that the school was striving to put vocational guidance into effect in some way. A large number of the high schools are getting their first experience in placement and guidance through the Government's farm enlistment plan, 53 schools specifying that their employment work is confined to the Boys' Working Reserve of the Department of Labor. Thirty-three—and no doubt many more should be added to the list—are doing placement work only in the commercial field, as part of the

[1] See "Journal of the Association of Collegiate Alumnae," current issues. (Published by the association, Cooperstown, N. Y.) for "News Notes" from the Bureau of Occupations.

[2] A Practical Program for the Preventing of Unemployment in America. By J. B. Andrews, December, 1914.

[3] See American Youth, January, 1917, pp. 8–9. Also Vocational Guidance Bulletin, January-February, 1917.

[4] See bibliography, under "Occupations."

[5] In cooperation with the Women's Educational and Industrial Union of Boston.

[6] See p. 75.

work of the commercial course. Others report regular courses in vocations.[1]

By way of conclusion it may be said that in the past 10 years vocational guidance has gone through the usual stages of private pathfinding and experimentation and ultimate public adoption. The Boston Vocation Bureau has been succeeded by a fairly complete system of vocational direction for the city, with a director of vocational guidance in charge, a central exchange—the Boston Placement Bureau—and vocational counselors for every school.[2] New York City has, besides the State employment offices, a staff of vocational counselors. San Francisco created the position of director of vocational guidance in 1916. In 1917 Pittsburgh appointed a director of vocational guidance for the public schools. The vocational survey motive has operated in a number of educational investigations, from the studies of school-leaving and employment to the occupational analyses of the Richmond, Minneapolis, and Indiana projects. With this external expansion has gone a development in literature and method that has transferred the problem, at least in part, from the stage of experimentation to that of fairly reliable practice.

[1] A complete list of the high schools reporting vocation bureaus in some form is given in the appendix.

[2] In November, 1917, the work of the Boston Vocation Bureau was transferred to the division of education of Harvard University, Cambridge, Mass.

III. STUDIES OF SCHOOL-LEAVING AND EMPLOYMENT.

Public concern in vocational guidance early centered about the problem of the 14 to 16 year old boy or girl who had left school to go to work. Starting primarily from the point of view of vocational training, this soon developed into a demand for an adequate program of both training and guidance. Waste in human resources was clearly revealed by the studies of school-leaving and employment that began with the Massachusetts investigation of 1906 and continued for several years. These studies showed that the school, carrying out ruthlessly its selective function through the medium of traditional courses of study, was driving children irresistibly into industry, and for the most part into the least desirable kind of industry. Practically all these studies came to the conclusion that not merely vocational training was needed, but guidance—educational guidance that would keep boys and girls in school and help them select useful courses of study, and specific vocational guidance that would aid boys and girls in planning ahead for their future occupations.

The general relation of these studies of school-leaving and employment to the vocational guidance movement has been indicated in the preceding chapter. In the present chapter the attempt is made to bring together the more important of these studies, in order that their findings may be considered and compared. A tabular statement has been prepared (Table 1, following) containing such items as are reasonably comparable, and this is followed by brief descriptions of each study. This material should be considered in relation to the accounts of work in typical centers, as presented in Chapter VI, since in most instances it is on the basis of the studies here described that vocational guidance plans have been instituted.

TABLE 1.—*Summary of principal studies of school-leaving and employment.*

Study.	Year.	Number of children.	Causes of school-leaving.	Types of occupations entered.	Beginning wage.
Massachusetts Commission on Industrial and Technical Education.	1906	5,459	Child's dissatisfaction with school; desire to earn.	Sixty-eight per cent into unskilled industries.	$2-$5.
Federal Report on Conditions Under Which Children Leave School to Go to Work.	1910	620	Earnings necessary, 29 per cent; earnings desired, 28 per cent; dissatisfaction with school, 27 per cent; preference for work, 10 per cent.	"Practically 90 per cent of boys and all girls entered industries where average weekly wage for all employees was under $10."	Boys, $2.19-$5.08; girls, $1.65-$4.78.

TABLE 1.—*Summary of principal studies of school-leaving and employment*—Continued.

Study.	Year.	Number of children.	Causes of school-leaving.	Types of occupations entered.	Beginning wage.
Worcester, Cambridge, and Somerville.	1911	978	Fifty per cent left out of causes other than economic pressure.	Seventy-eight per cent in factories and mills; remainder mercantile establishments.	$3-$5.
Hartford Vocational Guidance Committee.	1911	1,163	"Restless and discontented," 46 per cent; backward, 20 per cent; economic pressure, 26 per cent.	"Mostly unskilled odd jobs in factories and stores."	Average, $3.52.
Philadelphia Public Education Association.	1912	13,740	No data.	In factories, 43 per cent; store and office, 29 per cent; housework, 13 per cent; messengers and street trades, 4 per cent; skilled industries, only 3 per cent.	Ranges from unknown or zero (35 per cent of cases) to $6. Median, $3.50 to $4.
New York Vocational Guidance Survey.	1912	302	No data.	Street and wagon trades, 32 per cent; department store and office, 11 per cent; miscellaneous outside work, 10 per cent; manufacturing, 47 per cent.	
Cincinnati	1912	2,306	Economic pressure, 27 per cent; remainder desire to work, based frequently on dissatisfaction with school.	Shoe factories, 19 per cent; other factories, 15 per cent; errands and messengers, 22 per cent; department store, 15 per cent.	Boys, median, $3-$3.99; girls, $3-$2.99.
Chicago Stockyards District.	1912	560	Alleged economic pressure, 52 per cent; dissatisfaction with school, 33 per cent.	Factories, 42 per cent; errands and messenger, 23 per cent; mercantile establishments, 11 per cent. Only 6 per cent in skilled trades.	Average—boys, $4.25; girls, $3.61.
St. Louis	1911-1912	4,386		"Helpers," 45 per cent; errand, 10 per cent; messengers, 6 per cent; office work, 8 per cent.	
Des Moines and Sioux City.	1914	960	"Necessity, dissatisfaction with teacher," preference for work.		Average, $5.50.
Seattle	1913-1914	462	Economic pressure and dissatisfaction.		Girls, $5.10 to $7.08; boys, $6.07 to $7.76.
Waltham, Mass.	1914-1916	200	Dislike of school, backwardness, etc., 50 per cent; economic pressure, 35 per cent; preference for work, 10 per cent; wish of parents, 5 per cent.	Manufacturing, 65 per cent; mercantile, 13.5 per cent; office and messenger service, 11.5 per cent.	Average—boys, $4.45; girls, $4.41; 50 per cent of cases range between $3 and $6.
Chicago	1911-1916	6,758	Necessity, 32 per cent; earnings desired, 22 per cent; dissatisfaction, 30 per cent; preference for work, 4 per cent.	Boys: Errand and messenger, 46 per cent; office and street, 26 per cent; skilled trades, 10 per cent. Girls: Factory, 35 per cent; higher grade work, 56 per cent; skilled trades, 9 per cent.	Median, boys, $4.50 to $5; girls, $4 to $4.50.

MASSACHUSETTS COMMISSION ON INDUSTRIAL AND TECHNICAL EDUCATION (1906).

The first, and in many ways the most significant, of modern studies of school leaving and employment is contained in a portion of the report of the Massachusetts Commission on Industrial and Technical Education—the report of the subcommittee on the relation of the children to the industries.[1] The report found that there were approximately 25,000 children in Massachusetts between 14 and 16 years of age who had left school and were either idle or at work. Dr. Kingsbury states the problem presented by these boys and girls in the following terms:

> The State releases the child from its educational authority at 14, and the child who is no longer interested in the inactive school life, or who feels the stress of necessity for self-support, is forced to search for an opportunity to fit himself for industrial responsibilities. What awaits him? No schools exist which offer practical training until he is at least 16 or 18, and even then they are few in number and usually at a great distance from the child's home. He must turn to the "practical school of life" and seek employment, only to find that the doors of those industries which would afford him an opportunity "to pick up a trade" are not open to him until he is 16, or usually 18 years of age, while very few of the so-called apprenticeships receive him under 18. Even in the unskilled industries of the better class, proprietors are becoming more and more averse to the employment of the younger child. The result is that he drifts into an unskilled industry, or into one which is undesirable in character.

The committee sought to find whether the two years between 14 and 16 were, as they had been termed, "wasted years." It sought to find: (1) What the children of 14 and 15 are doing throughout the State; (2) what the educational and economic value of these years has been to the child at work; (3) what the educational and economic value of these years might be, and (4) what the economic status of the parents of these children is, and how necessary is the income of the child. The investigation covered 43 cities and towns, 5,459 children, 3,157 homes, and 354 establishments, representing 55 industries.

The 14-year-old child enters unskilled industries, and remains there, the report finds, while the 16-year-old child more often enters the higher-grade work. The desirable industries open to the boy 14 to 16 years of age, it is asserted, are extremely few in number; practically all employers in such industries declare they do not want the boy before he is 16, while the majority place the age at 18, and the numbers actually employed are very few. Printing and publishing, the manufacture of combs, horn, and celluloid, and machinery, are practically all of the skilled industries which take the younger boy. The girl 14 to 16 years of age is admitted to the textile industry, although not of the better grade, to the department stores, and to

[1] The investigation was conducted by Dr. Susan M. Kingsbury.

confectionery and cracker factories. A very few, indeed, are to be found in the stitching, pasting, and soldering occupations, or in the needle trades. The department store takes the girl into a juvenile industry, with all the evil consequences of low pay, of subjection to the rudeness of the world, and of instability of character and purpose.

The investigators concluded that 25,000 children in Massachusetts go to work or are idle at ages 14 and 15; that the class of family seems to have but little to do with the child's dropping out of school, except in grades below the seventh; that children, not parents, make the decision to leave school; that 68 per cent of the children who commence work between 14 and 16 are subjected to the evil influences of the unskilled industries or are in mills, and that the wage value of the years from 14 to 16 is very low—$2 to $5.

FEDERAL REPORT ON CONDITIONS UNDER WHICH CHILDREN LEAVE SCHOOL TO GO TO WORK (1910).

By act of Congress, approved January 29, 1907, the Secretary of Commerce and Labor was directed to—

> investigate and report on the industrial, social, moral, educational, and physical condition of women and child workers in the United States wherever employed, with special reference to their age, hours of labor, terms of employment, health, illiteracy, sanitary, and other conditions surrounding their occupation, and the means employed for the protection of their health, persons, and morals.

Volume VII of the 19-volume report prepared under this act by the Commissioner of Labor was devoted to "Conditions under which children leave school to go to work." The report covered 622 children in seven different localities taken from two Northern and two Southern States. The following questions were studied:

> (1) How many children in the selected industrial communities are leaving school to go to work?
>
> (2) Are their numbers increasing or decreasing?
>
> (3) What sort of children are they, and from what sort of homes do they come?
>
> (4) What sort of schools have they attended, and what has been their school experience?
>
> (5) What are the causes of their leaving school?
>
> (6) What legal regulations are there of the conditions under which they leave school, the conditions under which they enter the world of work, and the conditions under which they continue to work?
>
> (7) What educational, social, and recreational opportunities do they have after leaving day school, and how far do they make use of them?
>
> (8) What has been so far the industrial experience of the selected children?
>
> (9) What, so far as can be learned from the experience of the older members of the families and from the expressed judgments of the children's employers, are their industrial prospects, and how are these prospects likely to be affected by the conditions under which they begin their industrial life?

Of the 620 children under 16 years of age who left school to go to work, as studied in this report, 352 were boys and 268 girls; the great majority (513) were between 13 and 15 years of age; 151 being 13 years old and 281 being 14 years old; 53 were but 12 years of age, and there were 54 children (17 boys and 37 girls) who left school between the ages of 6 and 11 to go to work.

Of special interest for comparative purposes with later studies are questions numbered 3, 5, and 8 in the list given above.

Social conditions.—With regard to question 3 (kinds of families from which the children come), the report presents per capita weekly incomes for 567 families classified by housing conditions. Thirty-nine families had per capita weekly incomes of $1 to $149; 53, $1.50 to $1.99; 70, $2 to $2.49; 87, $2.50 to $2.99; 73, $3 to $3.49; 53, $3.50 to $3.99; 58, $4 to $4.49; 36, $4.50 to $4.99; 49, $5 to $5.99; 33, $6 to $7.99. The report takes care to point out that although a considerable majority of the children who leave school come from families in "third and fourth class" neighborhoods, their presence there does not always imply necessity, and that of those living in third-class neighborhoods, 15.6 per cent, and of those living in fourth-class neighborhoods, 16.7 per cent, had per capita weekly incomes of $4.50 and over.

On the whole, the impression produced by the study of the home and neighborhood conditions was that this was a fair average group of working people containing some examples both of easy circumstances and of acute poverty, but not, as a group, representing either extreme.

As to nativity, 83.9 per cent of the children were born in the United States. Half of the children (50.7 per cent) had American-born fathers. Few cases were found of children working because of the father's derelictions.

The largest proportion of working mothers was in the two most distinctively American communities studied. The parents of 242 (39.5 per cent) of the children were able and willing to send their children to school longer; 23, or 3.8 per cent were able but unwilling; 250, or 40.8 per cent, were unable but willing; and 97, or 15.9 per cent, were unable and unwilling to continue sending their children to school. Otherwise expressed, about two-fifths of the children left school of their own volition.

Causes of leaving school.—The report analyzes carefully the reasons for leaving school, weighing the alleged reasons for school leaving and testing these reasons by information gleaned from various sources about each family. Of those for whose families the incomes could be ascertained, the number and per cent leaving for the different causes were found to be as follows:

Causes of children leaving school to go to work.

Causes.	Children.	Per cent
Earnings necessary to family support	177	29.3
Child's help desired, though not necessary	172	28.4
Child's dissatisfaction with school	161	26.6
Child's preference for work	60	9.9
Other causes	35	5.8

The whole question of causes for leaving school is so significant that the detailed summary of causes as found by the report is reproduced herewith. It is especially important for comparison with the results of local studies.

TABLE 2.—*Summary of causes for children leaving school.*

[Federal report on condition of woman and child wage earners, 1910.]

Cause for leaving school.	Children.	Per cent.
Necessity:		
Earnings necessary to family support	169	
Help needed at home	6	
Self-support necessary	11	
Total	186	30.0
Child's help desired, though not necessary:		
In family support	140	
To buy property	12	
In home work	14	
To earn money for education of self or relative	7	
Total	173	27.9
Child's dissatisfaction with school:		
Tired of school	35	
Disliked school (general manner of life there)	54	
Disliked teacher	31	
Disliked study	16	
Could not learn	10	
Not promoted	5	
Too big for class	14	
Total	165	26.6
Child's preference for work:		
Work preferred to school	44	
Spending money wanted	8	
Association desired with friends who worked	9	
Total	61	9.8
Other causes:		
Ill health	16	
To be kept off the streets	1	
To learn a trade or business	6	
To avoid vaccination	2	
Removal of residence	1	
Mother's disapproval of coeducation	1	
"Too much play"	1	
Company pressure	7	
Total	35	5.7
Grand total	[1] 620	100.0

[1] Two children never went to school, but studied at home.

Industrial experience of children.—Practically 90 per cent of the boys and all of the girls entered industries whose average weekly

wage for all employees was under $10; 7 per cent of the boys entered industries whose average wage was between $10 and $15; and 3 per cent entered industries whose average wage was $15 or over. For the individual children, wages range all the way from nothing a week to $15; "a larger number fall in the $5 to $5.49 a week group than in any other; a considerably larger number, however, are on the lower side of this weekly wage than on the higher—374 below as against 146 above."

The 363 boys entered 107 different industries, and 265 girls entered 47 industries. The textile trades took 55.6 per cent of the entire group. The average *first* wages (weekly) for the textile trade ranged from $5.08 for boys and $4.38 for girls, down to $2.19 for boys and $1.65 for girls. For the nontextile trades the corresponding figures were; Maximum, boys, $4.55; girls, $4.78; minimum, boys, $2.52, and girls, $1.75. The average *latest* wage for the textile industries was: Boys, maximum, $5.82; minimum, $3.30; girls, maximum, $5.06; minimum, $2.36. For the nontextile trades the corresponding figures were: Boys, maximum, $5.17; minimum, $3.81; girls, maximum, $4.59; minimum, $2.52.

Considerably more than half of the children (62.1 per cent of the boys and 70 per cent of the girls) had never changed employers, a trifle over one-fourth had had two employers, and 9.3 per cent had had more than two. "The average number of positions held by the boys varied from 1.5 in Woonsocket and Plymouth to 2.6 in Georgia and Alabama, while for girls the variation was from 1.4 in Woonsocket and Hazleton to 2 in Georgia and Alabama counties."

WORCESTER, CAMBRIDGE, AND SOMERVILLE, MASS., 1911.[1]

Late in 1911 the Massachusetts State Department of Education undertook a study of three cities—Worcester, Cambridge, and Somerville—preparatory to the establishment of trade schools for girls. The same type of investigation was provided for all three communities. The field work of this investigation comprised visits to industrial establishments and to the homes of girls 14 to 16 years of age who had left school the previous year to go to work.

The study brought out the following facts, which, as the report notes, "may be accepted as typical of the educational and industrial situation throughout the State, especially as they are distinctly confirmatory of the conclusions reached by the commission on industrial and technical education in 1906":

The large factories or mills are receiving the great majority of 14 to 16 year old girls who are leaving school to go to work in the State.

[1] U. S. Bu. of Educ., Bul., 1913, No. 17, "A Trade School for Girls." Washington, Government Printing Office, 1913.

The number of 14 to 16 year old girls leaving school to go to work is increasing. The records of Worcester and Somerville show a marked increase in the past five years. The percentage of girls going to work is much greater than the percentage of increase in population.

The majority of young girls who leave school to go to work are only 14 years of age. They are dropping out, therefore, as soon as the law allows. Sixty per cent of such girls in Worcester, Cambridge, and Somerville in the school year of 1909–10 were 14 years of age.

There is a large loss of girls in the sixth and seventh grades. A large number have then reached the age of 14 and can secure working papers. One-third of the girls who left the public schools of Cambridge and all the schools of Worcester dropped out in the sixth and seventh grades. A much larger proportion, two-thirds, dropped out in the Somerville schools. Forty-three per cent dropped out of the sixth and seventh grades throughout the State in 1906, according to the State study based on 5,447 children. The length of schooling or the completion of the grammar grades, therefore, is not necessarily the determining factor in the large outgo of girls from the grammar schools.

The report goes carefully into the reasons for school leaving. Questions were asked regarding the occupation of father, mother, and other members of the family, character of these occupations, illness, home conditions, and the opinion of the parent (checked up by that of the investigator) as to the ability to give the girl longer schooling. It was conservatively stated as a result of these questions that fully 50 per cent of the girls 14 to 16 years of age studied in each of the three cities did not leave school because of economic pressure.

As to the character of employment, unskilled industries take the overwhelming proportion of the girls 14 to 16 years of age who leave school to go to work in the three cities. The report says:

The instability of these young workers is a universal problem in all three cities. The elementary processes which occupy young or inexperienced workers are purely mechanical. The work of the beginner, even in the better trades, does not afford training or working knowledge of the more skilled work. The work in unskilled trades points to nothing higher or better. The work is monotonous, easily learned, and the maximum pay, which is small, is soon reached. The beginner becomes discouraged with the lack of opportunity for advancement and determines to try something else. She drifts from place to place and never becomes proficient in any one thing.

In Somerville[1] investigation showed that "the factor[y]ized industries of Somerville and Cambridge and the mercantile establishments of Boston draw the majority of the young girls of 14 to 16 from the schools." This condition was found to be growing worse, rather than better, 251 girls under 16 having left public school to go to work in 1910, as compared with 187 in 1906, an increase of 34 per cent in the face of a population increase of less than 13 per cent. Of these 251 girls who left school to go to work, 9 per cent had gone beyond the sixth grade; 7 per cent had not yet reached the sixth

[1] Thirty-ninth annual report of the school committee of the city of Somerville, Mass. Somerville Journal Print, 1911. Pp. 127–132.

grade; two-fifths were in the sixth and seventh grades; and seven-tenths had left before reaching the ninth grade. Somerville showed a larger proportion dropping out than even a manufacturing city like Worcester.

Personal visits to 146 homes in Somerville indicated that 50 per cent of the girls might have gone or did go back to school; 63 per cent came from "intelligent" families, while fully 50 per cent came from really comfortable homes—a higher percentage than in Worcester. Thirty-five per cent of those going to work without real necessity were 14 years of age, as compared with 47 per cent in Worcester. Mothers of these girls nearly all showed appreciation of the advantages of schooling, but felt that the present school system did not prepare the girls for the situation they must meet as wage-earning women. Thirty-eight per cent of those who left school without special necessity were American and 23 per cent were Irish. The beginning weekly wage for these girls "clustered about" $3 or $4, the majority ranging between $3 and $5.

The conclusion reached by the investigators was that there was a pressing need for a trade-training school which would "take the 14–15 year old girls who will not go to the regular schools, and who must go to work in a year or two." It was asserted by the report that if such a trade-training school could be established to give girls equipment for a trade which offers some opportunity for development and advancement many would be enabled to enter the better trades who otherwise would have no other prospect than the factory or the store.

HARTFORD VOCATIONAL GUIDANCE COMMITTEE (1911).[1]

In November, 1911, a vocational guidance committee was formed in Hartford, Conn., to make an intensive study of the conditions surrounding the 1,163 workers 14 to 16 years old in Hartford. The committee consisted of representatives of the Board of School Visitors, the Principals' Club, the High-School Committee, the Civic Club, the Juvenile Commission, and the Consumers' League. The study covered:

(1) Investigation of local industries to find what the work was that was done by children—type of work, effect on health, possibilities for the future, etc.

(2) Investigation of local social and educational organizations that offer training to assist working minors.

(3) Investigation of the conditions under which children between 14 and 16 leave school.

It was shown that "the average industrial opportunity in Hartford open to children under 16 has practically no educational value

[1] Hartford (Conn.) Vocational Guidance Committee. Report. Hartford, 1914. (Lillian L. Kane, vocational counsellor.)

beyond the disicipline imposed by any mechanical task." Skilled trades are almost entirely closed to children between 14 and 16. "A few are found in printing and electrical shops, but for the most part they are in unskilled odd jobs in factories and stores."

In the investigation of conditions under which children between 14 and 16 left school, 494 cases were studied. Of 146 examined, 16 per cent were "good" in scholarship, 26 per cent passable, and 58 per cent unsatisfactory. Of a group of 42 in industry, 2 have retained their original positions (1 promoted), 14 children have shifted once, 13 twice, 8 three times, 3 four times, 2 five times, 1 six times, and 1 seven times, while the entire 42 have shifted 99 times. In wages, 4 showed no increase; the average weekly wage of these was $3.66. The wages of 28 had been increased; the average increase was $2.14, and the average final wage was $5.66.

Investigation of causes for leaving school showed that 46 per cent left because they were restless and discontented, 20 per cent because they were backward, and 26 per cent because of economic pressure.

PHILADELPHIA (1912).[1]

The Philadelphia study of school leaving and employment puts at the outset two fundamental questions: (1) Are the occupations in which the boys and girls are employed of such a nature that they will train for a competence in later life? (2) Is the immediate wage received of sufficient importance to counterbalance the tremendous loss of power in those who face mature life unprepared?

The answer to these questions is sought in an analysis of the 13,740 children known to be at work in Philadelphia in the year 1911–12. Boys formed 50.15 per cent of these workers, girls 49.85 per cent. It is not, therefore, the report points out, "alone the problem of the adolescent boy, dissatisfied, restless, wandering, but of the girl who is, or thinks she is, forced to add her earnings to the family income, or, as in the cases of 1,638 who are engaged in housework without pay, merely to stay at home to help, regardless of the future." Nor is this only the problem of the immigrant child, forced to work before his time; for 6,904 of these child workers are of American parentage.

Occupation.—Forty-three per cent of the children are in factories, "where the positions are largely mechanical and require but little time in learning, little responsibility, and great specialization of processes. These positions offer an initial wage which is alluringly high, but hold but little incentive for growth and but slightly advanced wages for the experienced operator." Twenty-nine per cent

[1] The Child, the School, and the Job, by James S. Hiatt. Public Education Association, Philadelphia, 1912.

enter the store and office, where a few may advance to higher place, but where a majority must hold low-grade positions which require little preparation or skill. Four per cent, the report shows, become messenger boys or enter the street trades, "which hide insidious dangers even more real than the unguarded machine." Barely 3 per cent enter the skilled industries which promise to lead to a recognized trade.

Wages were studied under four aspects: (1) The wages paid by different industries; (2) the average wage of those in the different industries whose pay is known to be between $2 and $6 per week; (3) that of a smaller number of special cases who receive less than $2 or more than $6 per week; and (4) the surprisingly large number who receive no pay in housework, or whose wage is entirely unknown to the family, as in many other cases. This last group represented 35.3 per cent of the total number studied. Of those receiving a known wage, 22.2 per cent received between $2 and $4, 36.9 per cent received between $4 and $6, and 5.2 per cent received $6 and over. The largest numbers were found in the group receiving $4 to $4.50, while approximately equal numbers were found in the groups receiving $3.50 to $4 and $5 to $6.

The following conclusions are drawn by the report:

1. That the problem of the working child is not an immigrant problem, since over 50 per cent of those reported as at work are of the second generation of American birth.

2. That this is not the problem of the boy alone, since over 49 per cent of the workers are girls.

3. That the vast majority of children who leave school at 14 to enter industry go into those kinds of employment which offer a large initial wage for simple mechanical processes, but which *hold out little or no opportunity for improvement and no competence at maturity.*

4. That wages received are so low as to force a parasitic life.

5. That but slight advancement is offered the 15-year-old over the 14-year-old child worker.

Under "unsolved" problems the report asserts that many phases of the problems—the proper fitting of the child for and into his life work—have not been touched upon. The report states:

1. This study shows in what industries children are at work at a given moment, but it shows nothing of the disastrous jumping from job to job with long intervening periods of idleness.

2. It classifies the workers into eight general groups, but it tells nothing of the details of the operations the children must undertake, nor the effect upon mature life of the monotonous strain of years of early employment.

3. It gives the wages earned in one week, but it tells nothing of the change in those wages when slack times come. We can by no means use the data given to compute the year's earnings of the child.

4. It gives the age of the workers, but it shows nothing of the school progress made before leaving, nor of the real effect of the training gained at so great cost to the city in the years spent in the school.

The report concludes with a prophecy:

When the solution comes it will touch life problems deeper, broader, more fundamental than can be reached by any one investigation. This is more than a mere matter of securing the best possible jobs for those now leaving school to enter industry.

Only by organizing a careful, continued study of conditions, only by finding just why our children leave school and what proportion a more attractive, more practical training would retain to maturer years, only by following the child into his employment and into his home in order to find out the facts and offer inspiration and practical help, can we begin to solve this great problem of the waste of adolescent life.

NEW YORK CITY (1912).[1]

The Vocational Guidance Survey was organized in New York to study the actual situation of children leaving school to go to work, in the hope of determining what vocational guidance should mean to the public schools of the city. The survey sought to secure facts which would answer these questions:

1. Why do children leave school in large numbers as soon as they are 14?
2. What becomes of them?
3. Will vocational guidance aid them?

Of the 302 children studied, 239 had gone to work. They had entered 406 jobs. Of these jobs, 94 were outside errands; 19 were "on wagons;" 16 on news stands; 29 were in department stores; 27 in office work; 44 in miscellaneous inside work; and 177 in manufacturing. In all this complexity only one thing remained constant, according to the report—the lack of training.

It ran through practically all jobs, whatever the type of establishment, and left them all the same dull gray color. In 314 out of the 406 jobs there was absolutely no training; in 41 there was some chance to "pick up" if the rush was not too great; in 30, some boys had a chance to work on one process, but this usually meant, "I did errands and sweeping and sometimes had a chance to work on a machine;" in 21, there was some supervision, but in the majority of these cases the children were either working in a small shop or with relatives.

The report pointed out that "there are no jobs for children under 16 which they ought to take;" that vocational guidance should mean chiefly guidance for training, rather than guidance for jobs; and that a study of the facts of industry is essential to further progress.

[1] Survey of occupations open to the girls of 14 to 16 years. Report of the Vocational Guidance Survey, *in* Report of the city superintendent of schools, 1912. Also Bulletin No. 9 of the Public Education Association of New York, 1912.

CINCINNATI, 1912.[1]

For some years private enterprise has made possible a systematic study of the problem of school leaving and employment in Cincinnati under highly favorable conditions. It has been possible to compile and study facts like the following about the working children of Cincinnati: Number who have left the schools to go to work each year since records have been kept; classification of the children who have left school during any one year, showing the type and location of the schools from which they come; their age, their sex, and their school grade; a tabulation of the kinds of occupations they engage in; a study of wages; and an investigation of economic necessity as a factor in child labor.[2]

Of the 2,366 working certificates issued during the year, 1,996, or 84.4 per cent, were to children from the schools of Cincinnati, and 370, or 15.6 per cent, were for those from schools outside the city. As in Philadelphia, there is but slight difference in sex, 52.8 per cent being boys and 47.2 per cent girls. Of the total number, 1,721, or 72.7 per cent, were 14 years of age, and 645, or 27.3 per cent, were 15. The ninth and tenth grades had been completed by 39 children; the eighth grade by 216; the seventh by 298; the sixth by 387; and the fifth by 425. In terms of retardation, 67 per cent of the public-school children who were at work were retarded, as compared with 28.7 per cent for the corresponding group still in school, or, in other words, the percentage of retardation among those who leave the public school to go to work is more than twice as great as that among children who are in school.

Occupations entered.—Of the 2,366 children who began work during the year, 19 per cent entered shoe factories; 17.2 per cent became errand boys and girls; 15.5 per cent went into department stores as cash or stock boys and girls, wrappers, or inside messengers; 8.7 per cent entered the tailoring and sewing trades; 6.8 per cent worked at home helping parents; 5.2 per cent became telegraph messengers; 3.9 per cent entered paper-box factories.

Mrs. Woolley points out that while a few of the occupations in this list include skilled work, even in these occupations the first two years of employment for those who begin at 14 are not made periods of training for skilled work, or apprenticeships in which the industry as a whole is learned. "A child in a shoe factory, for instance, is taught but one or two of the 150 or more processes involved in mak-

[1] A continuing study. For reports see Bibliography. A good brief statement of the first results is given by Mrs. Woolley in "The Elementary School Teacher." 14: 59–72; 132–139, October–November, 1913. ("Facts about the working children of Cincinnati and their bearing upon educational problems.")

[2] These topics are from the article by Mrs. Woolley referred to in the preceding note. The more comprehensive material that has appeared since deals chiefly with mental and physical measurements of working children.

ing a shoe. The children in the sewing trades pull bastings, or baste one kind of a seam." It is shown, as in so many of the other surveys, that many of the best department stores and most of the skilled trades are closed to children under 16. Mrs. Woolley declares:

> It is a conservative statement to say that only a small proportion of these children find themselves any better fitted to earn a living at 16 than they were when they began work at 14. Some of them, particularly those in the messenger service, are of less value in the industrial world as a result of the two years of work.

Wages.—The initial wage of 85 of the boys was less than $3; of 347 it was between $3 and $3.99; of 193 it was between $4 and $4.99; and of 62 it was $5 or over. For girls the initial wage was less than $3 in 317 cases, between $3 and $3.99 in 198 cases, between $4 and $4.99 in 49 cases; and $5 and over in 15 cases. A record was kept of the wages in the different positions held. At the time the statistics were taken half the children had held but one position, 32.3 per cent had held two, 11 per cent had held three, 2.6 per cent had held four, and 4 per cent had held five or more positions. It was found that the rate of pay increases with mere change of position, so that the children apparently have some justification for shifting.[1]

A study of 600 families showed that 73 per cent of the families did not need the child's earnings, while 27 per cent did. "The real force which is sending the majority of these children out into the industrial field," declared Mrs. Woolley, "is their own desire to go to work, and behind this desire to go to work is frequently dissatisfaction with school."

CHICAGO STOCKYARDS DISTRICT, 1912.[2]

Talbert's study of conditions in the Chicago stockyards district undertook to answer the following questions:

> What are the industrial opportunities for children, especially those between 14 and 16 years of age, in the stockyards district? What are the jobs they secure, their wages, and the chances for advancement? Does the public school adjust them to the economic environment? What is the attitude of parent and child to the school and to the job? What is the relation of the income of the family to the early leaving of school? What is done to bridge the gap between school and work, and to guide the youth to the vocation suited to his capacity and to future usefulness? What may be done?

Occupations.—Out of 560 positions held by boys and girls between 14 and 17 years of age, 252 were in factories; 109 errand boys' work: 62 in mercantile establishments; 26 were messengers, and the remaining 146 were distributed among 20 different occupations.

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[1] The Elementary School Teacher, November, 1913, p. 133, Table VII.

[2] Talbert, Ernest L. Opportunities in School and Industry for Children of the Stockyards District. University of Chicago Press, 1912.

Wages.—The average beginning wage of the girls was $3.61 per week. Twenty-five girls received from $3 to $3.50; 14 received from $3.50 to $4; 12 received $4 and $4.50, and the remaining 35 amounts vary from not exceeding $1 to $7.50.

The report points out that: (1) Most of the jobs secured belong to the low-grade industries; (2) a limit is soon reached in wages; (3) finding another job is sometimes the only way to secure more pay; (4) the advance is largely a matter of chance, there being no observable economic advantage in leaving school at an age greater than 14, and a higher grade at school, or in previous experience in other jobs of the character accessible to girls of the neighborhood.

ST. LOUIS, 1911–12.[1]

Between June 1, 1911, and March 1, 1912, 4,386 children 14 to 16 years of age left school in St. Louis, took employment certificates, and went to work. Of this number, 2,703, or about 62 per cent, were boys, and 1,683, or a little more than 38 per cent, were girls.

Not quite 14 per cent of these children were below fifth grade, 38 per cent were below the sixth grade, 56 per cent had not reached the seventh grade, and 78 per cent had not finished the seventh grade.

Occupations.—Nineteen occupations accounted for 95 per cent of the number of working children. These occupations, with the number in each, were:

TABLE 3.—*Distribution of juvenile workers in St. Louis, 1911–12.*

Occupation.	Boys.	Girls.	Total.
Helpers	1,136	739	1,875
Errand boys and girls	424	12	436
Messengers	236	.....	236
Office work	321	64	385
Clerks (shipping, stock, sales, etc.)	90	37	127
Cash boys and girls	14	261	275
Wrappers and packers (bundle)	81	78	159
Wagon and delivery	122	1	123
Sewing	6	100	106
Factory workers, operators, shopwork	49	52	101
Apprentices	13	41	54
Labeling (pasting and cutting labels)	14	40	54
Box makers (paper boxes, nailing)	27	13	40
Millinery	2	86	88
Laundry work (shakers, folders, manglers, sprinklers)	8	17	25
Confectioners (nut pickers) (candy)	3	40	43
Bottling (including bottle washing)	21	1	22
Bell and hall boys	12	.....	12
Counting and sorting	4	10	14
Total	2,583	1,592	4,175

As a result of this study Lewis concluded:

This study demonstrates very clearly what happens to children who leave school and enter vocational careers without direction or counsel. What might

[1] Lewis, E. E. Studies in Vocational Guidance. In School and Home Education, 32: 212-214; 247-251. February-March, 1913.

have happened to them had guidance been provided, can only be inferred. But it is safe to venture that the percentage of those entering unskilled and low-grade skilled industries would have been greatly decreased, and also that the fetching and carrying occupations, which are in every respect "blind alleys," would have been avoided in a large degree. Someone with the time might study an equal number of children leaving the schools of a city where guidance is provided, and contrast the two groups. Such a contrast would measure the kind and value of the guidance given. It would then be possible to know, to some degree, at least, how much a State or city could afford to spend instituting such guidance. At present we have a feeling that guidance is valuable, but we are unable to say to what degree.

DES MOINES AND SIOUX CITY, IOWA, 1914.[1]

Treating a somewhat different group of young people from any of the studies heretofore considered, Lewis's study of 800 Iowa boys forms an important addition to the series. A thousand boys—900 in Des Moines and 100 in Sioux City—were interviewed, and 800 returns were considered sufficiently reliable to tabulate. The boys were from 16 to 20 years of age and had not completed a course in high school. The questions asked included the following:

What was the boy's reason (or reasons) for leaving school? How long after leaving school was he idle before securing work? How many different jobs has he been in since leaving school? For each job he has been in, answer the following questions:

Kind of job.
Kind of business.
How he found the job.
How long he was in it.
His average weekly wage—
(a) When he started the job, and
(b) When he left it.
The length of time idle between jobs.
The reason for changing jobs.
What trade, if any, does the boy now desire to prepare for?

Nearly 20 per cent of the boys were reached on holidays and during the evenings in pool halls and on the street. Returns from about 80 per cent were secured during working hours through the cooperation of employers, more than 200 of whom were interviewed. The report showed that more than 40 per cent of the boys came from schools located outside of the city in which they were living when interviewed. Four hundred and fifty-five (52 per cent) came from 62 different schools located in Des Moines; 150 (17 per cent) came from schools located in 107 cities and towns in Iowa outside of Des Moines and Sioux City; 117 (13 per cent) came from 27 different States

[1] Lewis, E. E. Work, Wages, and Schooling of Eight Hundred Iowa Boys in Relation to the Problems of Vocational Guidance. Bulletin No. 9, State University of Iowa.

other than Iowa; 41 (nearly 5 per cent) came from 8 different foreign countries. The remaining boys came from schools located in or near Sioux City.

A study of all the cases showed that two of the boys had concluded as many as 12 jobs each, and that the average boy passed through three jobs in two years. The average length of time for a job was slightly over a year.[1]

Wages.—The Iowa study gives a distribution table for the beginning wages of the boys. The range is from nothing to $20 a week, with an average of about $5.50 a week. There are as many boys who receive $5.05 or less a week as there are boys who receive more than $5.50 a week. The middle 50 per cent of the boys receive a weekly wage of from $4.50 to $7.

Occupations.—The 33 occupations pursued by these Iowa boys included: Helpers and general workers, 376; drivers (delivery, transfer, teamsters, etc.), 256; clerks (shipping, stock, sales, etc.), 233; errand and messenger boys, 157; farm hands (gardeners, dairymen, etc.), 130; wrappers and packers, 79; apprentices (all occupations), 69; printers (pressman, type, and linotype, etc.), 59; office, boys, 57; bill posters and peddlers, 49; porters, pages, hall and bell boys, 48; hosiery mill operatives, 39; railroad hands (brakeman, section, freight, etc.), 25; elevator boys, 22; cement workers (mixers, feeders, carriers, etc.), 22; electrical workers (wiring, lineman, switchboard, etc.), 21; water boys, 21; bookkeepers, stenographers, and time keepers, 21; drafters and engravers, 20; machinists, 20; waiters, 20; agents and collectors, 18; tailors, 18; cutters (glass, shoe, paper, etc.), 15; soda fountain boys, 15; painters and decorators, 14; cigar makers, 14; labelers and letter addressers, 11; pressers (clothes), 11; bootblacks 11; checkers, sorters, and ticket takers, 11; miners, 11; cash boys, 10.

Among the 23 conclusions drawn by the report are the following:

More than 40 per cent of the boys leave schools located in cities other than the one in which they are now living.

Workers in juvenile occupations are recruited largely from the sixth, seventh, and eighth grades of the public schools and at about the time when the children are 14, 15, and 16 years of age.

Boys leave schools for a great variety of reasons. The three most commonly offered are "necessity," "dissatisfaction with school," and "preference for work."

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[1] Some of the investigators point out that this shifting is not always a bad thing. It is referred to in these reports chiefly as an indication of the dissatisfying nature of the average job, though sometimes, of course, it represents the attempt of an ambitious worker to better himself, or even actual "sampling" of various types of employment. A certain proportion of young workers unquestionably "find themselves" by this process, but another large proportion simply become examples of "job hoboism." Employment supervision by the school would tend to eliminate the gambling element in shifting.

SEATTLE, 1913–14.

The first report[1] of Mrs. Reed's work in Seattle discussed: (1) Children who left school in 1913–14; (2) school leaving and labor permits; (3) educational and occupational experience of boys and girls.

Wages.—The Seattle report presents a complete wage table for all the elementary school pupils and 138 high-school pupils. The average initial wage of grade-school girls was $5.10 and of high-school girls $7.08; of grade-school boys $6.07 and of high-school boys $7.76.

Reasons for school-leaving.—Particular attention was given to the reasons why children left school. It was found that in the elementary school 173, or approximately 40 per cent of the children studied, left because of economic pressure, and 115, or 28 per cent, because of dissatisfaction of some kind with school. Mrs. Reed points out that—

> as economic pressure is a relative term, and as about 30 per cent of these classified under this heading admitted that they disliked school and were glad to be relieved of attending, we are justified in assuming that "dissatisfaction" is an even more potent factor in school leaving than the statistical tabulation indicated.

Table 4 presents a tabular view of the assigned reasons for leaving school.

TABLE 4.—*Reasons why children left school (Seattle).*

Reasons.	Grades.			High schools.			Grand total.		
	Boys.	Girls.	Total.	Boys.	Girls.	Total.	Boys.	Girls.	Total.
1. Personal illness	7	8	15	91	42	133	98	50	148
2. Family illness	.....	11	11	19	5	24	19	16	35
3. Economic pressure	91	82	173	132	62	194	223	144	367
4. Moved	14	31	45	63	38	101	77	69	146
5. Custom to leave	7	9	16	.....	.....	.....	7	9	16
6. Indifferent, trouble, dislike	36	30	66	21	46	67	57	76	133
7. To enter other schools	.....	6	6	8	12	20	8	18	26
8. To marry	.....	1	1	3	1	4	3	2	5
9. Did not pass; too large; discouraged; misfit	17	8	25	67	80	147	84	88	172
10. To learn trade	4	7	14	5	3	8	9	10	19
11. Prefer to work	15	9	24	53	17	70	68	26	94
12. Forced by parent	4	5	9	.....	.....	.....	4	5	9
13. Other reasons	.....	.....	.....	24	30	54	24	30	54
Total	195	207	402	486	336	822	681	543	1,22[illegible]

The following conclusions are among those drawn by the report:

> There are two main reasons which have not changed much in five years for school leaving—economic pressure and dissatisfaction.

[1] Seattle Children in School and Industry, by Mrs. Anna Y. Reed, Seattle school board, 1915. A further account of the three years' work in Seattle is given in the same author's Vocational Guidance Report, 1913–1916, and in "Newsboys in the Public Schools." World Book Co., 1917.

Department stores and offices are receiving the largest percentage of our young girls; messenger service and offices, the largest percentage of boys.

Occupational instability is a universal and a serious problem.

The initial wage scale is higher in Seattle than in any other city reporting.

WALTHAM, MASS., 1914–16.[1]

The Waltham inquiry was undertaken by the Children's Bureau for the purpose of obtaining information concerning children in this industrial city of 30,000 who go to work below the age of 16, to ascertain the relation of these children to industry, and also to find out the community needs in regard to vocational training and vocational guidance.

Following an examination of the Massachusetts laws relating to employment of minors, involving a study of the records kept by the school authorities, a field study was made to find out facts as to age, sex, nativity, and living conditions of the working children of Waltham; why they leave school, where they work, what occupations they enter, the conditions under which they work, what wages they earn, how steadily they are employed, and what opportunity they have for advancement.

The data collected covered 200 of the 500 children between the ages of 14 and 16 who took out their first employment certificates during the period from September 1, 1911, to August 31, 1914. Over four-fifths of the children studied were natives and 59 per cent were born in Waltham.

Reasons for leaving school.—The reasons for leaving school to go to work usually indicated "a lack of adjustment between the school and the child." One-half of the children gave such reasons as dislike of school, backwardness in school, trouble with the teacher; more than one-third of the children gave economic necessity as their primary reason. About one-tenth gave preference for work. "Nearly 5 per cent said that their parents wished them to leave."

Types of employment.—Between 55 and 65 per cent of the children studied were employed in manufacturing establishments, but the number and proportion have declined since the laws of 1913 went into effect. The chief child-employing establishment in Waltham is the cotton mill, but this, too, shows a decrease, only 15 per cent of the children with employment certificates going into the cotton mill in 1915, as compared with 42 per cent in 1912.

Wages.—The children who left school as soon as they had reached the age of 14 years received lower initial wages and advanced more slowly than those who remained in school until they were 15 or 16. The wages received by children reporting wages ranged from $1 to $15 a week, the average final wages being $6.06 a week. For 68.8 per

[1] "From School to Work," Children's Bureau Publication, 1917.

cent of these children the final and initial wages were the same; and for 10.6 per cent the final wages were lower than the initial wages.

The report concludes that "children in Waltham who leave school between 14 and 16 years of age are not adapted to industry, and only in the few cases where the workers are 'learning the business' does industry make the necessary adaptation to the child."

The report recommends that a trained vocational adviser be secured, who should give full time to the work of supervising juvenile employment in connection with the public school. Such an officer, the report suggests, would study the industries of the community, secure the cooperation of the employers, and map out a plan for vocational education which would be adapted to the needs of the Waltham children. The vocational adviser would also—

> study the children who are desirous of leaving school to go to work, their home problems, and their ambitions, and suggest more schooling, or a different kind of schooling, or advise in regard to their choice of employment and assist them in finding suitable positions.

CHICAGO BUREAU OF VOCATIONAL GUIDANCE.[1]

The Chicago bureau's study of children who leave schoool to go to work covers the five years ending April 1, 1916. The children who furnished the data came to the vocational bureau for advice and assistance in securing employment upon leaving school. Complete industrial histories were secured for a large number of children, showing "what becomes of boys and girls who leave school early, in what kind of work they engage, and with what success."

Reasons for leaving school are tabulated according to what seemed to be the principal motive. Of the 6,758 cases studied, 2,187 left because of necessity; 1,507 because their earnings were desired, though not needed; 2,025 because of dissatisfaction with school ("didn't like teacher," "tired of school," "made fun of," etc.); 301 because they preferred work to school; 381 because they had "graduated" from the eighth grade and considered they had finished school; 231 because they could not afford books with which to go on to high school; and 126 from other causes.

Of the 4,854 children employed in 1915, according to the factory inspector's report, 623 were in department stores, 566 were errand boys in printing establishments, and 447 were employed by confectioners. Nine industries employed 52 per cent of the children. The six, in addition to the three mentioned, were: Metal trades, 224; soaps and washing powders, 164; telegraph and telephone, 164; boot and shoe manufacturing, 138; paper boxes, 129; and clothing, 113. The report points out that in Chicago practically the only work open

[1] Report of Bureau of Vocational Guidance. From 62d An. Rep., Bd. of Educ., Chicago, 1916, by Anne S. Davis.

to children who leave school at the age of 14 is the most unskilled and poorly paid. The majority of the children go into the candy factories, where they pack and wrap candy; into the box factories, where they "turn in," "cover," "bind," and "tie;" into the tailor shops, where they pull bastings and brush clothes, but rarely do any form of needle work. Some go into the department stores, where they are employed as cash girls, as inspectors, as stock boys, and messengers, while others enter the boot and shoe factories, where they tie and cut threads, polish and clean shoes, tag, lace, and assemble parts of shoes.

Since the Chicago report is based upon an experience of five years, and since Miss Davis, the author of the report, has kept in touch with school-leaving investigations in other cities, the conclusions which the Chicago report offers may reasonably be applied to the entire series of studies. Miss Davis finds:

There are two main reasons for children leaving school—economic pressure and dissatisfaction with school. The latter plays the most important part.

About 50 per cent of the children leave school before they reach the eighth grade.

Children leaving school seem to have little idea of what they want to do or what they think they can do.

The kind of job secured is often a matter of chance. Drifting from job to job rarely leads to better opportunities, but produces unstable habits.

The occupations open to boys and girls are noneducative. They are easily learned and are monotonous and mechanical. They offer little opportunity for advancement.

Because the children change positions so frequently and because they work so little of the time, their wages are not likely to increase the family income sufficiently to make up for their loss of schooling.[1]

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[1]All the studies reported upon in this section, except that of Chicago, were made prior to the outbreak of the great war. In a note to her 1916 report, Miss Davis notes that the price of juvenile labor has advanced materially because of the war. No reliable statistics are yet available for the changed conditions since the United States entered the war, although special figures collected by the Bureau of Education in the fall of 1917 suggest that there has been some falling off in school attendance, particularly in high school. A determined stand has been made, however, by the Federal Government and many of the States, on the child-labor situation, and constructive efforts have been made to direct such juvenile labor as may be used through official channels, with guarantees of employment supervision. The latest developments are, at the time of going to press, (December, 1918) the "Back-to-school" movement of the Department of Labor and other agencies, and the establishment of a "junior section," with specific vocational guidance aims, in the United States Employment Service.

IV. MATERIAL ON THE OCCUPATIONS.

In practice vocational guidance necessarily involves two main considerations—the qualifications of the individual and the characteristics of the occupations. Early efforts at counseling were chiefly concerned with the individual end of the problem. Recent progress, however, has been largely in the direction of studying the occupations, since accurate knowledge of occupational conditions and processes is at present accumulating much more rapidly than knowledge of the human factors.[1]

One of the things that distinguished Prof. Parsons from other types of advisers on vocations was that he made use of official statistics regarding occupations. Previous writers on "choosing a vocation" had contented themselves with glorifying certain selected careers and holding up illustrious examples of successful men and women. Parsons began to analyze the geographical features of industry. He sought to find from the census figures "what States, city, or sections of the country employ most workers in a given industry." This seems elementary, indeed, compared with the present efforts of the Federal Government to apportion labor resources, but it was a new note in the study of vocations, and especially a new note in its significance for vocational guidance in the schools. Parsons studied industrial conditions to find to what extent an industry was localized. He found, for example:

> That in 1900 turpentine farming was confined wholly to these Southern States—Alabama, Florida, Georgia, Louisiana, Mississippi, North and South Carolina; and that Georgia, Florida, and Alabama together employed 85.1 per cent of the total number, while Georgia alone employed 43.9 per cent.
>
> That the silk manufacturing industry was localized chiefly in New Jersey and Pennsylvania.
>
> That the States employing the greatest number of quarrymen were Pennsylvania, New York, Ohio, Vermont, Indiana, and Massachusetts.

[1] Although Hollingworth (Vocational Psychology, p. 19) says, "It is more and more coming to be realized that a thorough understanding of the aptitudes which the individual brings to his work is as important as the knowledge of the opportunities which its environment affords," his whole book affords striking evidence of the lack of definite achievement in the former field. Even the "vocational psychograph" (outline of characteristics with regard to vocation) proceeds by "discovering first the necessary abilities and capacities which *a given sort of performance demands*," i. e., it begins at the occupational end.

That the manufacture of boots and shoes centered chiefly in the following North Atlantic States: Massachusetts, New Hampshire, New York, and Maine. Massachusetts alone employed 50.3 per cent of the boot and shoe makers and repairers in the United States.

STATISTICAL STUDIES OF OCCUPATIONS.

Bureau of Labor Statistics.—Statistical material relating to vocations has tended to become more usable in recent years. In connection with the 1910 census, special efforts were made to gather significant occupational data, and Volume IV (Occupations) affords basic material for an understanding of the industrial organizations. In recent years specially equipped Government bureaus have investigated industrial conditions, interpreted the immensely valuable census information that otherwise would remain largely unused, and issued timely summaries of industrial reports.[1] A glance at the list of bulletins of the Bureau of Labor Statistics since 1912 will give some idea of the comprehensiveness of the material now available through this one source for a study of occupations.[2] This bureau has made separate studies of wages and hours of labor in 24 groups of occupations; of women in industry; of industrial accidents and hygiene; and there are important studies covering employment and unemployment, vocational education, night work, welfare work, short-unit courses, and minimum-wage legislation.

Report on women and child wage earners.—Apart from the regular bulletins of the Bureau of Labor Statistics, another seldom used but exceedingly valuable source of statistical information on occupations is the Report of the Commissioner of Labor on the condition of women and child wage earners in the United States.[3] This report was prepared in the first flush of enthusiasm for studies of the human problem in industry and its value is correspondingly high for the teacher seeking to know the occupations. Unfortunately only a small edition of the complete report, which was in 19 volumes, was printed, but an excellent summary is available in Bulletin 175 of the Bureau of Labor Statistics.[4] The following list of titles will indicate the scope of the work, the volumes starred being of special value for vocational guidance:

I. Cotton Textile Industry.
II. Men's Ready-Made Clothing.
III. Glass Industry.
IV. Silk Industry.
*V. Wage-Earning Women in Stores and Factories.

[1] Particularly valuable to teachers and vocational counsellors is the Monthly Review of the Bureau of Labor Statistics, established in 1914.
[2] A complete list is given in the bibliography, page 116.
[3] See p. 41.
[4] Washington, Government Printing Office, 1916.

VI. The Beginning of Child-Labor Legislation in Certain States; a Comparative Study.
*VII. Conditions under which Children Leave School to go to Work.
*VIII. Juvenile Delinquency and its Relation to Employment.
*IX. History of Women in Industry and Industry in the United States.
X. History of Women in Trade Unions.
*XI. Employment of Women in Metal Trades.
*XII. Employment of Women in Laundries.
XIII. Infant Mortality and its Relation to the Employment of Mothers.
XIV. Causes of Death among Women and Child Cotton-Mill Operatives.
XV. Relation between Occupation and Criminality of Women.
XVI. Family Budgets of Typical Cotton-Mill Workers.
XVII. Hookworm Disease among Cotton-Mill Operatives.
*XVIII. Employment of Women and Children in Selected Industries.
XIX. Labor Laws and Factory Conditions.

State use of census material.—How census material has been adapted to local or group use is illustrated by the Indiana experience. In 1915 the Indiana University issued "A Study of the People of Indiana and their Occupations for Purposes of Vocational Education." The assigned purposes of this study were:

(1) To establish a fact-basis for the consideration of vocational education and the development of vocational courses in Indiana.
(2) To serve as a reference and compendium of information concerning the people of the State and their occupations.
(3) To isolate specific problems requiring further investigation.

In this study the census material relating to Indiana was analyzed under the following heads:

1. Facts concerning the people of Indiana.
2. The occupations of the people of Indiana.
3. Agricultural pursuits.
4. Manufacturing and mechanical pursuits.
5. Trade pursuits.
6. Domestic and personal service.
7. Transportation.
8. Professional pursuits.
9. Clerical pursuits.
10. Mining.
11. Public service.
12. Relative importance of agricultural and industrial pursuits.
13. Deductions relative to education.

It was pointed out that local surveys, important though they are, can not safely answer the question as to the type of trade or prevocational courses needed, since the population is too mobile and occupational conditions constantly changing. "State surveys will yield more dependable data, and a national survey would be even more satisfactory." In the case of Indiana, since 74 per cent of the people born in Indiana were still living in Indiana in 1910, and since the occupations of Indiana are in the main not very different from those found in the States to which the 26 per cent have migrated, it

seemed safe to conclude that a State survey would constitute a sound basis for vocational and prevocational courses.

The Ayres studies.—Other attempts to interpret and utilize census data are illustrated by a 1913 publication of the division of education of the Russell Sage Foundation, entitled: "Constant and Variable Occupations and their Bearing in Vocational Education."[1] In this study Dr. Ayres sought to ascertain the number of workers in the two types of occupations—"constant occupations" being those which engage the services of considerable and fairly constant proportions of the workers, while "variable occupations" are those which are not of this settled character.[2]

The inquiry consisted of an analysis of the occupational data of the twelfth census for cities of more than 50,000 population. The number of people engaged in each of 140 separate occupations in each of these cities was studied, and it was found that there were 20 occupations which are constant "in the sense that the number of men workers in each is everywhere at least equal to one for each 1,000 people in the population"; and that there were 41 less constant occupations, each of which employed more than one in 10,000 of the population in every city. The 20 constant occupations listed in the descending order of the proportion of workers in the median cities are: (1) Laborers, (2) merchants, (3) clerks, (4) draymen, (5) salesmen, (6) carpenters, (7) steam railroad men, (8) machinists, (9) painters, (10) bookkeepers, (11) waiters, (12) engineers, (13) printers, (14) blacksmiths, (15) masons, (16) barbers, (17) plumbers, (18) street railroad men, (19) shoemakers, (20) bakers.

In his conclusion Dr. Ayres points out that the chief value of such facts as he presents is to throw light on certain characteristics of occupations. "All such information," he asserts, "is useful in helping to secure a better fact-basis for our thinking and acting with respect to the problems of vocational education and vocational guidance."

Occupational data in survey reports.—Use of occupational data from the census and other Federal sources has become fairly general recently, especially in educational surveys, where accurate information on occupations is coming more and more to be presented as the basis of programs of vocational education and vocational guidance. Conspicuous utilization of occupational statistics will be found in the Richmond, Minneapolis, and Indiana surveys by the National Society for the Promotion of Industrial Education; in the volumes of the Cleveland Survey report;[3] and in most of the recent surveys

[1] Sage Foundation Publications, No. E-136.

[2] "House painting must be carried on in the city where the house is, while paint may be manufactured anywhere."

[3] Particularly the nine volumes on wage earning and education (see p. 74 of this report).

by the United States Bureau of Education, especially North Dakota, Negro Education, and San Francisco.[1]

VOCATIONAL PAMPHLETS.

Parsons' experiment had indicated that one of the immediate needs in guidance work was for brief, reliable statements on the various vocations. Almost nothing was available. Accordingly the first efforts of the agencies that sprang up in Boston, as well as in New York, were directed to preparing leaflets. The Boston Vocation Bureau began by employing two expert investigators to make first-hand studies of occupations, to find—

what an occupation is, its conditions and openings, what it demands of a boy, what it offers in pay and advancement, what opportunities are open for securing the specific training it requires, and what the general conditions of employment are as regards health and effect upon the life of the individual.

The information for these leaflets was collected chiefly by personal visits to firms, shops, or factories, and by consultation with employers, superintendents, foremen, employees, and labor men. In the first two years of the bureau's existence over 100 occupations were investigated,[2] and printed leaflets were issued covering the following occupations: The machinist, banking, the baker, confectionery manufacture, the architect, the landscape architect, the grocer, bookkeeping and accounting, the department store and its opportunities for young men.

The stated objects of these bulletins were:

(1) To present vocational facts simply and accurately.

(2) To make accessible a knowledge of all the employments; the professions, as well as the trades, skilled and semiskilled and unskilled; the business, the home-making and governmental callings, and also any new and significant vocational activities of men and women.

(3) So far as possible to supply parents, teachers, and others interested with the material necessary for an intelligent consideration of the occupations, their needs, demands, opportunities, relative desirability, training requirements, and the possibilities they may offer for careers.

(4) To analyze the relation of vocational aptitudes, interests, and habits to modern industrial demands, and thus lay an adequate foundation for a system of training regardful of social as well as economical needs.

The pamphlet on "The Baker" may be used to illustrate the type. It is an eight-page publication, dealing "mainly with the industry as found in the large modern baking establishments, using machinery and employing many people." The conditions of the industry are reviewed, and the disadvantages as well as advantages frankly stated. The positions in the bakery are described, from chore boy

[1] Bulletin, 1916, No. 27, pp. 19–22; Bul., 1916, No. 38, pp. 98–103; and Bul., 1917, No. 46, p. 499.

[2] An. rep., Com. of Labor Statistics, p. 423.

or helper to floorman or head floorman. For the boy, he should be "at least 16 years of age, of good habits, health, and strength." A grammar-school education, or the seventh grade at least, is necessary, and there are opportunities for the boy who knows something of chemistry, bookkeeping, and business methods. "The industry offers a good future for men capable of management, and fairly steady employment for young men who must work for moderate wages." The remainder of the pamphlet is taken up with a report of the Massachusetts Board of Health on sanitary conditions in bakeries, with simple tables from Federal Census reports, showing the place of baking among the industries of the State and the names of trade periodicals.

Later publications of the Vocation Bureau have tended to become more detailed. "Business Employments," "The Law as a Vocation," and "The Shoe Industry,"[1] are one-volume studies of their respective fields. They were prepared with the same careful attention to facts that characterized the earlier short pamphlets, but they present a much more complete picture. They are the sort of books to put in the hands of high-school students whose interests have been aroused. At the same time any worker already engaged in any one of the three fields will learn much he would never otherwise find out about the complete organization of which he is a part.

The spirit of these books is well expressed in the preface to "The Law as a Vocation," where Mr. Allen writes:

> It is the purpose of the following pages to present a clear, accurate, and impartial study of the profession of the law, its nature, present-day conditions, personal and educational entrance requirements, dangers and disadvantages, high demands, varied fields of service, its earnings and emoluments, and all that has distinct and important bearing upon the law as a vocation.
>
> If this book confirms the young man of ability in his choice of the profession and keeps out of its ranks those who have not the natural and acquired fitness necessary to success, the purpose of the book will have been accomplished. It is sent out to young men and their advisers with this end in view.

Two other Boston agencies sought to do for girls what the Vocation Bureau had begun to do for boys. The Vocation Office for Girls of the Trade Education League issued the following pamphlets between 1912 and 1914: Telephone Operating; Bookbinding; Stenography and Typewriting; Nursery Maid; Dressmaking; Millinery; Straw Hat Making; Manicuring and Hairdressing; Nursing; Salesmanship; Clothing Machine Operating; Paper Box Making; Confectionery Manufacture; Knit Goods Manufacture. These are pamphlets averaging a dozen pages, having as their primary purpose "to supply teachers with information and material for counseling with parents and with girls as to the choice of a vocation."

[1] All by F. J. Allen (1915, 1916).

The points are carefully made that these bulletins do not attempt a scientific study of the occupations, though they are based upon information secured in the main by personal visitation; that they are critically reviewed by persons familiar with the industry and by economists; and that the material in them is not intended to take the place of personal consultation.

The form of the material is practically identical with that of the pamphlets of the Vocation Bureau for Boys. Bulletin No. 14, "Knit Goods Manufacture," for example, discusses the nature of the work, processes, positions and pay, opportunities for advancement, conditions of the work, qualifications required, training, statistics, and references. Four blank pages are included "for local studies of the occupation," so that local investigators may fill in, under the same heads as are given in the text, the facts about the establishments nearest at hand.

A service that developed both in the direction of short vocational pamphlets and detailed studies and has continued in increasing effectiveness is that rendered by the Women's Educational and Industrial Union, which aims especially at the better trained, more mature woman. The Appointments Bureau issued the following short vocational pamphlets between 1910 and 1912: Probation Work; Advertising; Home and School Visiting; Publishing-house Work; Poultry Raising; Proofreading; Real Estate; Industrial Chemistry; Bacteriological Work; Interior Decoration; Medical Social Service; Organizing Charity; Social Service for Children; Settlement Work.

On the investigation side the Women's Educational and Industrial Union entered carefully into the field of occupations for trained women. The first publication of the Research Department (Vocations for the Trained Woman, 1910) was the outgrowth of a conviction that women needed to know more about vocations other than teaching. This book was designed to suggest to women about to choose an occupation "some lines of work now open to them and the equipment which they should have to justify a hope of success in any given line." The work was modeled after the Finger Post, an English publication. Different types of service were presented under the following heads, each prepared by a specialist in his field: I. Social and economic service. II. Scientific work. III. Domestic science and arts. IV. Agriculture. V. Business. VI. Clerical and secretarial work. VII. Literary work. VIII. Art. IX. Special forms of teaching.

The series of "studies in the economic relations of women," of which the volume just referred to was the beginning, now constitutes one of the most useful sources of information on vocations for women. Other volumes include investigations of the incomes and expendi-

tures of 450 women in Boston and studies of dressmaking, millinery, and the boot and shoe industry as trades for women.

The New York pamphlets.—One of the first activities of the Students' aid committee of the New York High-School Teachers' Association was the publishing of short leaflets. The introductory pamphlets, Choosing a Career: A Circular of Information for Boys and Choosing a Career: A Circular of Information for Girls, were followed by pamphlets on Openings for Boys in Machine Shops and The Vocational Adjustments of Children in the Public Schools. While there was not much attempt to investigate industrial conditions, the material in these pamphlets was compiled with some care, and available census statistics were utilized.

The Rochester and Buffalo bulletins.—The publication of short bulletins, usually 4 to 16 pages, has continued to be a profitable type of work for communities undertaking vocational guidance. Particularly valuable are vocational pamphlets prepared by such cities as Rochester and Buffalo, where the essential point of connecting up the choice of occupations specifically with the opportunity for training is kept in view. The Rochester bulletins, compiled by Raymond C. Keople, of the Department of Vocational Education, on the basis of a survey made by the Chamber of Commerce, cover the following subjects: Machine Industry; Woodworking Industry; Clothing Industry; Collar Factories; Apprenticeship Plan. They describe the conditions of the trade as it is in Rochester, the requirements and pay; they give lists of trade periodicals and books as well as of places where the trade is taught.

"Profitable Wage-Earning Occupations in Buffalo" is the title of the series issued by the bureau of vocational guidance and industrial education of the Buffalo Chamber of Commerce. The preface to each of these bulletins emphasizes the selective opportunity that the schools afford and the importance of getting a broad general training before attempting to choose a vocation. The field of each group of occupations is then described. The pamphlet on "The Graphic Arts," for example, shows that under the heading of graphic arts a multitude of opportunities for earning a livelihood are offered. The occupations are concerned with the preparation of charts and diagrams, signs and placards, maps, working drawings, illustrations, designs, engineering and architectural plans, and the teaching of all of these subjects. Each of these specific occupations is taken up and described. Facts about wages are presented, the importance of continuing training while at work is emphasized, and interesting brief statements of "builders of careers" are given, so that the pupil may know the typical experiences of others like himself who have been reasonably successful in the occupation. Page 15 of this pamphlet lists "some helpful books," and page 16 indicates the courses in

industrial art given in Buffalo with the schools where the courses may be taken.

The bulletin on "Printing and Allied Trades" is similar in scope to that on the graphic arts, except that it is illustrated with pictures of a hand-composing room, linotype machine and operator, pressroom, and bindery. There is also a chart showing the distribution of workers on the basis of training.

University-extension pamphlets.—University-extension activities, especially in women's colleges or coeducational institutions, have recently been directed to the field of vocational opportunities for women. While the vocational conferences that have been held at the University of Wisconsin, at the University of Washington, at Wheaton College, and elsewhere are apart from the purposes of this report, which deals primarily with the public schools, the vocational pamphlets that have sometimes been evolved are of immediate concern in a review of the literature of occupations. A typical pamphlet is that issued by the extension division of the University of Wisconsin, in November, 1916, under the title: "Nursing as a Vocation for women."[1] In the introduction a physician described the need for trained nurses. The bulletin itself gives a brief history of nursing as a profession; outlines the physical, educational, and character qualifications, the scope of training, and choice of a training school; lists the accredited hospitals in Wisconsin, with courses of study and conditions of work in the hospitals; and describes the opportunities in nursing, both from the point of view of remuneration and of useful service.

The Chicago pamphlet.—A vocational pamphlet that represents the transition stage between the opportunity bulletin and the social survey studies, later to be considered, is Miss Anne Davis's "Occupations and Industries Open to Children Between Fourteen and Sixteen Years of Age."[2] The purpose of the report was "to give information to teachers and others who have the duty and the responsibility of advising the young concerning their future." The pamphlet resembles the studies of school leaving and employment in its point of view and in its characterizations of the kind of employments open to children. It does give, however, specific information as to entrance opportunities in the following industries and occupations: Box factories, candy factories, tailor shops, department stores, engraving, boot and shoe manufacturing, molding and picture-frame manufacturing, knitting, laundry work, office work, bookbinding, press clipping, novelty work, and bakery work. For the more important child-employing trades this Chicago report attempts some-

[1] By Katherine M. Olmsted, Bul. of the Univ. of Wisconsin, Serial No. 814, general series, No. 612.
[2] Chicago Board of Education, 1914.

thing of an analysis of the processes, a kind of vocational survey material, which has since undergone considerable development.[1] The following are typical descriptions from Miss Davis's pamphlet:

Novelty work.—Novelty work includes metal, paper, celluloid, jewelry, leather novelties, and postal cards and calendars. More girls than boys are employed at this work. They do such simple processes as gluing stones in rings, carding jewelry, tying ribbons and strings on invitations and calendars, stringing bags, pasting, mounting; putting leather in watch fobs, assembling, sorting, counting, and coloring postal cards. The beginner generally earns from $3 to $5. There is no opportunity for advancement either in wage or in manual skill, and the work is seasonal. The best-paid workers seldom receive more than $7 or $8 a week.

Press clipping.—Press-clipping bureaus employ girls to clip articles from newspapers, paying them $3.50 and $4 a week. Clipping is mechanical work and requires more speed than intelligence. If a girl is quick and fairly bright, she may be promoted to the position of "reader," who reads and marks articles to be clipped. The best readers never earn more than $9 a week. Not only is there no future in the work, but it prepares a girl for no other line of work.

Errand and messenger work.—The telegraph messenger has the least chance for advancement of all the boys engaged in errand work. He seldom has any prospect with the telegraph company itself. One company in the city offers to send the messenger boys in its employ to the school of telegraphy one hour a day. Out of 337 boys employed, however, only 25 attend the school, since they are not paid for the time spent in training. Except for this one opportunity, there is absolutely no chance for the messenger boy to learn anything. Since much time is spent in loafing between messages, the moral effect upon the boy is not good. Some employers are unwilling to engage boys who have been in the messenger service, because they idle away their time, and many of them have fallen into bad company as the result of being on the streets.

Messenger boys are paid on a commission basis, receiving 1½ cents for each message delivered. The boy who is quick can earn about $5 a week. The majority earn between $4 and $5.

For examples of vocational pamphlets other than those described in this section the reader is referred to the bibliography.[2]

SPECIAL STUDIES OF OCCUPATIONS.

The publications hitherto reviewed in this chapter have dealt mainly with the external facts of occupations. They have been either scientific statistical compilations or brief statements of occupational conditions intended to help in the selection of a vocation. The studies of which typical examples are to be considered in this section, on the contrary, have as their primary concern human welfare in industry. They have come mainly from official investigations or through the researches of private charitable foundations.[3]

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[1] See p. 71–74.

[2] Section on Occupations, p. 112.

[3] They followed such well-known English examples as Booth's "Life and Labor of London," and the British royal commission's reports on the employment of women and girls and on labor.

The New York Factory Investigating Commission.—Typical of the former type of study is the work of the factory investigating commission of New York. Organized first in 1911 to study methods of preventing the recurrence of such disasters as the Triangle fire in New York City, in which a number of factory workers lost their lives, it was authorized by the legislature of 1913 to make a study of wages. The State's investigators selected four occupations for intensive study—candy making, paper-box making, the manufacture of men's shirts, and department stores. Hearings were held, and the materials published. The result is a mass of interesting and significant facts and opinions on occupations, representing a variety of points of view.

Sage Foundation studies.—The second type of social study of industry is exemplified by the work of the Russell Sage Foundation. In 1908 the committee on women's work, then a department of the Alliance Employment Bureau of New York, entered upon a study of the artificial-flower trades which was afterwards carried out in cooperation with the State factory investigating commission. The report went minutely into the problem of seasonal employment, home work, wages, home responsibilities, and trade training of women for this field in New York City. Studies that followed covered: Women in the bookbinding trades; saleswomen in mercantile stores—a study of its physical conditions of work, hours, wages, regularity of employment, vocational training, and living conditions of employees of Baltimore stores; and women in the trades—the Pittsburgh survey report on women's work in the needle trades, metal trades, canning, confectionery, etc.

The point of view from which these studies were made is indicated in the introduction to "Women in the Bookbinding Trades," where Miss Van Kleek points out that "there has been in recent years a putting forward of a protective program for women wage earners which would seem to most people unnecessary, or at least premature, if proposed for men." She cites the decision of the United States Supreme Court that—

> Woman's physical structure and the functions she performs in consequence thereof justify special legislation restricting or qualifying the conditions under which she should be permitted to toil.[1]

and suggests that legislative treatment of women's work is likely for some time to be different from that of men.

A list of investigations.—Convinced of the importance for vocational considerations of the various investigations of industries that had been made in New York City, the Russell Sage Foundation pub-

[1] U. S. Repts, vol. 208. Cases adjudged in the Supreme Court at the October term, 1907, p. 420 (as cited in Van Kleek).

lished a list of the published reports of these investigations in 1916.[1] Sixty-four separate reports of first-hand investigations of shops and workers are listed. The value of a publication like this for vocational guidance is that it furnishes an index of the efforts that have been made to inventory existing information about conditions in the industries. In the Sage Foundation list studies of all the types so far discussed in this chapter appear, but in a majority of the studies, as in the introduction to the list, the human welfare viewpoint prevails. It is from such publications as are represented in this group that teachers can best secure that social vision so urgently needed for the awakening of the schools.

INTENSIVE STUDIES OF OCCUPATIONAL REQUIREMENTS.

A problem insistently met with in the movement for vocational training was the lack of accurate knowledge of the requirements of the trade itself. Vocational books—even the more carefully compiled vocational pamphlets—depended mainly upon the views of those in the trade, either as employers or workers, for information as to the processes involved. Investigations made from various angles showed, however, that this type of information was unreliable. Employers seldom knew what the essential factors were, as a basis for training; they usually described their work in general terms. Vocational guidance workers were inclined in their enthusiasm to consider the individual occupation a less complicated thing than it really is.

The Richmond Survey.—The Richmond Survey, made in 1914 by the National Society for the Promotion of Industrial Education, was the first of a series of industrial surveys having as a special aim the determination of the essential processes in a given trade and the type of training necessary for these processes. In this survey the requirements of three important industries—building trades, printing, and railroading—were analyzed and tabulated.

Minneapolis.—The Richmond Survey was followed by similar surveys for Minneapolis and the State of Indiana. The National Society proceeded on the theory that not every community and every State could undertake exhaustive surveys by specialists, but that all communities would receive some benefit if type surveys were available for different classes of localities. Richmond had served as the type for cities of about 100,000 population, with a large native population and widely diversified industries. Minneapolis presented the problem of the city of half a million, with a different set of industrial

[1] Investigations of industries in New York City, 1905–1915. Compiled by Henrietta R. Walker.

and social conditions. Indiana was sufficiently like a number of other Middle Western States to make a vocational survey of Indiana applicable in many respects to other States.

The Minneapolis survey analyzes the educational requirements for the following trades: Building trades (contractors, bricklayers and masons, carpenters, electric-wiring men, hoisting engineers, lathers, painters and decorators, plasterers, plumbers and gas fitters, sheet-metal workers, stationary engineers, steam fitters, stonecutters, structural-iron workers); electrical workers (telephone, electric railway, production of electric heat, power, and light, manufacture of electrical apparatus, installation of switchboard apparatus, armature winder, overhead and underground construction); metal trades (machine shop, boiler shop, automobile industry, sheet-metal industry, foundry); wood trades (lumber yard, machine department, cabinet department); printing trades (book and job composing room, newspaper composing room, pressroom of book and job houses, newspaper pressroom); flour mill (flour and grist mill products, wheat storage, loading department, wheat cleaning, grinding and bolting, resting department, maintenance and repair, power); baking (large bakery, small bakery, special cake shops, cracker factory); laundries; garment trades (cutting, buttonhole making, button sewing, examining, pressing, packing, superintendent or manager, foreman or forewoman, shirt making, workingmen's clothing, women's wear, corsets, caps, cravates, bags); dressmaking and millinery; knitting mill (knitting, washing, bleaching, fleecing, cutting, folding, and boxing); department-store salesmanship. The survey report also considered such questions as: What art education is needed in industry? What vocational education is needed for noncommissioned officers of industry? What vocational education is needed for office work, for homeworkers? A sample of the information furnished about each type of worker is given in the Appendix (p. 134).

Indiana.—The Indiana surveys, undertaken by the State board of education with the cooperation of the National Society for the Promotion of Industrial Education, attempted to carry out still further the ideas of the Richmond and Minneapolis surveys, selecting a number of typical communities throughout the State as the basis for a State-wide program. Indiana had already had a survey based on the occupational material of the census, as well as a study of one city.[1] The localities selected for further study were: Richmond, Evansville, Madison, Jefferson County, and Indianapolis. Each community undertaking a survey in cooperation with the State authorities appointed a local survey committee, consisting of representatives of the schools, manufactures, business and labor inter-

[1] See p. 61.

ests, and other groups interested in vocational work. The surveys covered the following questions:

1. What is the economic status of the community and its social attitude toward the industrial work?
2. What is the situation as regards variety and concentration of industries?
3. In what ways do workers obtain training?
   (*a*) Is there any apprenticeship system?
   (*b*) What percentage of all young beginners are apprenticed?
4. Relations of occupation to school training:
   (*a*) Is the industry hampered by any lack of knowledge of training on the part of beginners?
   (*b*) Is general school training beyond the "working-paper" grade needed for success in the job?
   (*c*) What does the job not give in skill and knowledge to equip the workers for a start on the next job?
   (*d*) Has any system of promotion or economic reward for efficiency been established? If so, what is it?
   (*e*) Is a complete high-school education necessary for success in any job in the establishment?
   (*f*) Is systematic instruction in either technical knowledge or manipulative skill desirable after the worker has entered the industry?
   (*g*) Could such instruction be most helpfully and practically given inside of the industrial establishment or in part-time day courses, or in evening classes in special schools?

Practically all the material gathered under these headings and published in the reports has significance for vocational guidance as well as for vocational training, but of special importance are the analysis charts of occupations. The occupational analyses attempt to give a "composite view of the knowledge and ability demanded by the industries and the training desired by the men and women (*a*) who seek promotion or desire to prepare themselves for other jobs; (*b*) who seek greater skill and knowledge for leadership." The analyses were approved by employers, foremen, engineers, and workmen in the industries before publication.

The Indianapolis report is conspicuous among these survey reports:

(1) By the effort to present process analyses by industries; (2) by the effort to summarize the results of the survey in analysis charts of occupations; (3) by the effort to consummate trade agreements; and (4) by the effort to regard the conditions of employment and vocational needs of boys and girls 14 to 16 years of age and of those who have passed the age of compulsory school attendance.[1]

To illustrate the scope of the charts in this survey under metal trades, "engine lathes" are first considered. The special machine knowledge required is classified according to (1) operatives, (2) knowledge of machines and attachments, (3) tools used. With this is to be used the chart showing "uniform knowledge" required. The special machine knowledge for engine lathes, in part, is as follows:

[1] Report of the Indianapolis Survey for Vocational Education, p. 1.

Engine lathes—Special machine knowledge.

Operations.	Knowledge of machines and attachments.	Tools used.
A-1. Turning on centers. Turning on mandrels. Care of centers.	Types of lathes. Name, care, and use of the principal parts of an engine-lathe; legs, bed shears or ways, feed rack. Headstock; live center, spindle, driving cone, driving gear, back gear, back gear handle, face plate. Tailstock; dead center, hand wheel, spindle, set over or adjusting screw, clamping device. Carriage, saddle; plain rest, compound rest, tool post, handle for operating cross feed, handle for crank for operating cross slide. Apron; hand travers, handle or crank, automatic feed knob. Screw cutting lever or half nuts, automatic cross feed knob, screw setting gauges. Feed works; stud, or spindle, stud feed cone, feed rod cone, feed rod or spline shaft, stud change gear, lead screw change gear, intermediate gear, lead screw, feed-motion reversing lever, index plate. Quick change gear box and mechanism. Plain cylindrical turning. Locating centers; centering by dividers, surface gaugers, hermaphrodites, cup centers, center square. Testing location of centers, changing center marks, use of centering machine. Drilling and reaming for centers. Method of holding work between centers; use of lathe dogs, care in oiling centers, adjusting work to turn freely. Care of lathe centers. Shapes of centers, necessity of true centers. Hard and soft centers, grinding lathe centers, lining up lathe centers. Spring of the work, effect of the force of the cut on spring, when turning slender work or work of heavy cross-section. Action of bent-tailed dog in springing the work. Correct methods of driving the work. Use of straight-tailed dogs, equalizing dogs, proper adjustment of machine to prevent errors. Setting the tool, squaring the ends, calipering, roughing cut, finishing cut. Kinds of fits and their uses including allowance for same. Sliding fit, driving fit, forced fit, shrink fit. Care of mandrels, types of mandrels, expanding mandrels and advantages. General consideration of filing. Files for lathe work, avoiding pinning, speed of the work for filing, methods observed for even filing. Use of emery. Use of polishing stick. Speeds for polishing. Care of centers in filing. Finishing polished surface. Use of hand tools; diamond parting and round nosed groovers.	Name, care and use of tool post and set of tools. Inserted tool blade holders and tools. Care of tools to include tempering, grinding, oiling, etc.

The chart for uniform knowledge lists the machinists' tools that need to be known, and such items as the following:

C-1.

Time card, tool checking, factory procedure; the function and organization involved in manufacturing; explanations of the practices followed in the preparation of manufacturing information, planning operations, time standards, wage systems, etc.

C-2.

General rule for safety and sanitation; safety appliances, and the laws governing same. Hygiene. Knowledge of first aid in case of injury.

C-3.

Belts and pulleys.

Transmission of belts, ropes, and chains.

Velocity ratio of a set of pulleys.

Belts and pulleys—Continued.

Determining pulley diameters.
Determining length of open and crossed belts.
Speed cones and conoids.
Cone pulleys for open and crossed belts.
The effective pull of belts as determined by width and thickness.
Horsepower transmitted by belts.
Care and use of belting, leather, canvas, etc.
Suitable belt dressing.
Tightening or guide pulleys.
Guiding of belts.
Climbing of belts, flat and crowned faced pulley belt fastenings; lacing, splicing, and gluing.
Belt connections for nonparalleled shafts of angular belt drive.

The Cleveland Survey volumes.—Nine of the 25 volumes of the Cleveland Foundation Survey of Education of Cleveland, Ohio (1915–16), belong definitely in the occupational literature of vocational guidance. These volumes are:

Boys and girls in commercial work. Department store occupations. Dressmaking and millinery. Railroad and street transportation. The building trades. The garment trades. The metal trades. The printing trades. Wage earning and education (summary volume).

The method of treatment in these reports may be illustrated from the following summary of two of the volumes:

Department store occupations: Purpose and scope; department stores; 5 and 10 cent stores; working conditions and health; wages and employment; analysis of jobs; vocational training for department store workers; looking for work. Under "analysis of jobs" are discussed: The sales or floor positions of men (messenger or floor boy, bundle or wrapper; stock boy, salesman, floor man or section manager); the delivery department or outside positions of men (boy or specials, wagon boy or jumper, driver or chauffeur); jobs in the marking and stock rooms (checker, wheeler, marker, tube-room girls); the sales force or floor positions of women (bundler, wrapper, or check girl, cashier or inspector, stock girl, junior saleswomen, saleswomen).

Railroad and street transportation.—Railroad transportation—scope of study; requirements for entrance; promotion in railroad service; steadiness of employment; methods of discipline; duties of the service; union organization; accidents; age and nativity; wages; hours of labor; the problem of training; how railroads train workers; the contribution of the public school. Motor and wagon transportation—chauffeurs and repairmen; teamsters. Street railroad transportation—qualifications for employment; former occupations; age requirements; nationality; promotion; discipline; cash deposits; union organizations; wages; hours of labor.

THE HEALTH ASPECTS OF OCCUPATIONS.

In many of the studies reviewed in this chapter, health considerations are more or less prominent. The literature of vocations has always given health an important place, but it is only recently that material on vocational diseases has been made available for general use. An important recent addition to guidance literature is the elaborate work by George M. Kober and William C. Hansen, "The Diseases of Occupation and Vocational Hygiene."[1] Part I deals with specific occupational diseases; fatigue and occupation; occupational affections of the throat, mouth, nose, and ear; occupational affections of the skin. Part II deals with the etiology and prophylaxis of occupational diseases; vocational hygiene; and analyses of occupations with health requirements. Part III deals with the relation of clinical statistics, governmental studies, and hygiene to occupational diseases. The editors of this volume were assisted by 30 contributors in various fields.

Typical of recent health studies under Federal auspices is Public Health Bulletin No. 81 (January, 1917), "Studies in Vocational Diseases."[2] This bulletin comprises a study of the effect of gas-heating appliances upon the air of workshops as studied in the garment industries in New York City. The official summary of this report points out that garment workers are liable to chronic poisoning by carbon monoxide gas, pressers being the class of workers most exposed to the danger, and recommends a system of regular inspection to insure proper hygienic conditions, standards enforced by regulations, and education of workers in the use of safety precautions.

OCCUPATIONAL MATERIAL AND THE NEWER BOOKS ON GUIDANCE.

The accumulating studies of occupations from various points of view are having a noticeable effect on the practice of vocational guidance and particularly on the available literature of guidance. The teacher is no longer dependent upon the mere "How-to-succeed" books of a few years ago. The books on vocations that confined their attention chiefly to the professions and business are slowly being replaced by books that endeavor to vision, however dimly, the whole industrial and social organization, including the countless types of service whereof the educated men and women of yesterday hardly knew the existence.[3]

If they do nothing else, these newer books on occupations should prevent that self-sufficient attitude of the vocational "counselor"

[1] P. Blackiston's Son & Co., Philadelphia, 1916. 918 pp.
[2] Washington, Government Printing Office, 1917. 79 pp.
[3] Gowin and Wheatley's "Occupations" (Ginn & Co., 1916) suggests what the modern textbook on vocations can be.

who does not realize his limitations and does not understand the enormousness of his task. In any case some degree of negative guidance becomes possible for the teacher who masters the literature of occupations. Such a teacher is at least able to say, with the "woman of national reputation" cited by Miss Roelofs in her study of household employment[1]: "After six years of investigation of women in industry I do not know what occupation to advise. I know what occupations I should not advise."

[1] The road to trained service in the household, p. 4.

V. SCHOOL USE OF OCCUPATIONAL MATERIAL.

In the preceding chapter the developing literature of vocations was reviewed. It was noted that through the various types of studies of occupations a considerable fact-basis for vocational guidance has been established. The purpose of the present chapter is to consider how the schools and the teachers may utilize this accumulating knowledge of occupations for the purposes of vocational guidance.

IN ESTABLISHING VOCATIONAL TRAINING.

Many of the studies reviewed in the chapter on occupations were undertaken in order to find a basis for adequate training. The first use to which occupational information is to be put, therefore, whether it was gathered for that purpose or not, is in the creation of systems of vocational education. From the point of view of vocational guidance all types of studies of occupations have value for vocational training. Vocational guidance is concerned in seeing to it that those who are planning vocational courses shall know, not merely the trades and the processes, but also the human-welfare side of industry, and that no attempt shall be made to train workers for occupations which investigations have shown are, humanly-speaking, not worth training for. Vocational guidance is concerned that health and other factors in industry shall be considered before plans for industrial training are adopted.

With vocational training recognized and established, it becomes an important school function to inventory the opportunities for training and make them known. It is of little help to the prospective worker to know what occupations are open to him unless he can at the same time be instructed as to where suitable training may be secured. Pioneer charting of this type was done by the Women's Educational and Industrial Union of Boston as early as 1910. The handbook issued in 1913 [1] forms a useful guide to the opportunities for training offered by public and private agencies in Boston. The effective arrangement of the book, particularly its double listing of schools and vocations, makes it a worthy example for other cities. A very useful charting was done by the Public Education Association of Philadelphia,[2] and still more recently the Cincinnati Chamber of

[1] Opportunities for Vocational Training in Boston. [2] Study No. 43.

Commerce has published a guide to training in Cincinnati. In connection with the Minneapolis survey of 1916 opportunities for vocational training were also inventoried, and the resulting chart of available agencies offers a useful beginning for occupational advice.[1]

IN GIVING VOCATIONAL INFORMATION.

There are four distinct methods of presenting vocational information to pupils: (1) Through vocational talks by representatives of the vocation; (2) through vocational pamphlets; (3) through the study of English, civics, and other school subjects; (4) through regular courses in vocational information.

Long before vocational guidance was recognized as a definite movement in education, the practice prevailed in many schools of having men and women who represented particular callings come in and describe their vocations. The value of the plan depends largely upon the individual speaker and the care with which details are worked out at the school. Some high schools have found that one successful way to handle this type of vocational guidance is to furnish the speaker with an outline, based on what investigation of occupations has shown to be the essential points. The worker in a given field usually knows it too intimately to give a clear description of it to a group of young people, and unless his statement is planned in advance by some one who knows what is wanted, the result is likely to be vague and more or less unreliable, the worker being prejudiced very greatly for or against the occupation by which he earns his livelihood. The outline frequently clarifies the speaker's thinking about his own vocation. Through it, furthermore, the teacher is able to lead his pupils to a comparison of vocations based on the same essential points. He can, also, discuss the talk with his pupils afterward, bringing out the important points. In this way the pupils get the benefit of the personality of the speaker and at the same time check up his information with such knowledge of occupations and industrial conditions as the teacher can contribute.

Vocational pamphlets.—In the preceding chapter some account was given of the vocational pamphlet material that has developed since the early days of the Boston Vocation Bureau. With the material now available and the successful examples already at hand to show what the form should be, almost any good-sized community should be able to issue vocational pamphlets. Books on vocations do not take the place of these convenient leaflets, which often have an influence quite out of proportion to the expense involved in preparing and printing them. Even when local leaflets are not available the teacher can render a service by getting leaflets that are already pre-

[1] Bulletin 199 of the Bureau of Labor Statistics, p. 116.

pared into the hands of the pupils. The popularity of the salesmanship leaflets of the private publishing houses[1] suggests that here is a field of practical guidance, almost untouched by the school, that could be entered with assurance of useful results.

Vocational guidance through English and other subjects.—The Grand Rapids plan of vocational guidance through English composition is described in detail elsewhere in this report.[2] It is essentially a common-sense attempt to introduce as content-material a mind of information that is important wherever introduced. It is recognition of the fact that English composition, like certain other school subjects, is a tool subject, and that children may as well sharpen their tools on useful things as on things that are of no use. In Grand Rapids the plan is systematized, so that one year the student is reading and writing on the lives of men and women who were conspicuous exponents of certain vocations, and another year he is building plans for his own career.

The value of such method of teaching vocational guidance will depend almost entirely upon how much the teacher knows of the world of occupations. The success or failure of such a course hinges on the teacher's knowledge of occupational material.

It should be noted that English is by no means the only subject through which vocational information can be imparted. It is difficult to find any school subject into which occupational information can not be introduced with resultant gain in vitality for the subject itself as well as for vocational guidance. History and social studies, especially, involve recognition of the world of industry and vocational adjustments. The problem, after all, becomes one of making school instruction part and parcel of real life instead of something apart. Arithmetic may just as well concern itself with the problems of modern industry as with those of an age that is gone or an age that never was. In the Buffalo vocational pamphlet on "Printing and the Allied Trades" Mr. Zurbrick suggests to boys in Buffalo schools, under the heading "Some problems in arithmetic," the following:

> In the city of Buffalo in 1899 there were 2,444 wage earners, and in 1909 there were 3,232, in the printing and publishing trade. At that rate of increase you can estimate how many men there would be at the time you read this book. Find out the number of new men it would require to make up this annual increase. For every 1,000 men about 30 drop out of the ranks annually from natural causes. Consider this also and determine how many new apprentices the printers of this city can use every year without interfering with the employment of those already in the trade. In your school library you will find a census report on occupations, and by the aid of this you can make the calculation of the number of new printers needed in any city in the country. About two-thirds of all the wage earners in these trades are compositors and pressmen.

[1] Such as "The Counsellor," for example, published by the Curtis Publishing Co.
[2] See p. 86.

In other words, information about the world's work is the proper content material for school subjects, and the prominent place the life-career motive occupies in the lives of all human beings justifies a much wider use of vocational information than most schools give. The war has intensified enormously the significance of this. The value of such content material will, again, depend upon the extent to which scientific studies of the occupations are used as the basis.

Courses in vocational information.—The formal course in vocations, or "the life-career class," as it has been termed, is used in many high schools where the correlation plan carried out in Grand Rapids is not possible. It can also be used to supplement and round out a plan of vocational guidance through English composition and civics or occupational correlations in all subjects. From this point of view it is a summary course designed to present to pupils a general view of the world of human service. The following outline for the study of a vocation in such a course is suggested by the National Education Commission on the Reorganization of Secondary Education:

OUTLINE FOR THE STUDY OF A VOCATION.

I. General statement concerning the vocation:
   1. Value of the vocation as a social service.
   2. Duties of one engaged in it.
   3. Number engaged in it in local community.
   4. Relative number engaged in it in general, with its probable future development.
   5. Relative capital invested in it.

II. Personal qualities demanded:
   1. Qualities of manner, temperament, character.
   2. Mental ability.
   3. Physical demands.

III. Preparation required:
   1. General education.
   2. Special or vocational education.
   3. Apprenticeship conditions.
   4. Experience required.

IV. Wages earned by workers:
   1. Range of wages made (table showing distribution of all cases).
   2. Average wage per week.
   3. Relation of wage to length of experience and preparation.

V. Length of working season, working week, working day, etc.

VI. Health of the workers:
   1. Healthful or unhealthful conditions.
   2. Dangers, accidents, or risks.

VII. Opportunities for employment:
   1. In local community.
   2. In general.

VIII. Organization of the industry, including the relations of the worker to his fellow workers, his employers, and the community.

IX. Status of the workers:
1. Opportunities for advancement.
2. Time for recreation and enjoyment.
3. Adequate income for recreation and the comforts of life.
4. Any other items of peculiar interest in this connection.

Lessons in community and national life.—One of the most promising attempts to present, either through the regular school subjects or in the life-career class, the underlying principles of social and industrial life has come directly out of the war. Impressed with the necessity for an understanding of the structure of modern society as a basis for intelligent cooperation in war-time activities, the Food Administration and the Bureau of Education arranged for the publication, monthly during 1917–18, of a series of "Lessons in Community and National Life." These lessons dealt with world-organization in relation to the special problem brought forward by the war. The material was issued in three sections, one for the intermediate elementary grades, another for the upper elementary grades and the first year of the high school, and the third for the last three years of high school. The first issue (October, 1917) contained lessons on "Some fundamental aspects of social organization," "The western pioneer," and "The cooperation of specialists in modern society." The self-sufficing frontiersman is compared with the modern man and the complexities of modern society. One lesson describes "The varied occupations of the colonial farm" in contrast with the factory method of to-day. Still another lesson is given on the work involved in feeding a city.

In the later issues vocations come in for special attention. The May (1918) issue contained lessons on the worker and the wage system, women in industry, labor organizations, and employment agencies. The lesson on employment agencies portrays the work of private employment agencies and of State and city public employment offices. It reviews the English experience with labor exchanges, before and after the war, and describes the expanded work of the United States Employment Service of the Department of Labor. The employment management movement is outlined and descriptions are given of employment departments in operation. These lessons have made it much easier than it was for teachers to grasp the important facts of economic and social organization, and therefore to teach vocations intelligently.

A GENERAL GUIDANCE PLAN.

It is possible to make use of several of the methods here suggested at one and the same time. From his experience in Middletown, Conn., Supt. W. A. Wheatley drew up an outline of guidance work that, while intended primarily for smaller centers, is applicable to almost any community. Mr. Wheatley's outline, somewhat briefed, was as follows:

1. In all the grades discuss the salient vocational facts found in each of the grade subjects, especially in literature, geography, and community civics.

(a) In geography, what cities or regions are noted for important productions and industries? What is the home city or region noted for? Discuss the more common occupations connected with these productions and industries.

(b) In civics make as concrete as possible the occupations of the various public officers and workmen.

(c) In all grade subjects it would be well to dramatize a number of the life careers found.

2. In all the grades, but more especially in the sixth, seventh, and eighth grades, base much of the English composition on the vocational interests, experiences, preferences, and expectations of the children.

3. In grades six, seven, and eight send letters to parents on educational and vocational guidance, together with high-school courses of study and explanations of what each course is intended to prepare for. Arrange conferences with teachers and parents of these pupils for mutual enlightenment, encouragement, and cooperation.

4. Besides the vocational enlightenment given sixth, seventh, and eighth grade pupils by their teachers, have the teachers of the vocational information course in the high school and the high-school principal talk with these pupils about their future.

5. Have pupils on entering high school express on their enrollment blanks their choice of a high-school course and, if possible, of a life vocation.

6. Take great pains in helping first-year high-school pupils select the right course of study and the right electives in that course.

7. Provide in the high-school library a large amount of helpful vocational literature for teachers and for pupils.

8. Throughout the high-school course have the English teachers base considerable composition work on the vocational interests, experiences, preferences, and expectations of the pupils.

9. Organize a survey of the city's vocational opportunities and limitations, getting whatever assistance possible from the (men's) local chamber of commerce and (the women's) social-service league or their equivalents.

10. Offer first and second year high-school pupils an elective course in vocations for which credit toward graduation is given. Make this course as vital as possible by means of visits to near-by farms, factories, stores, etc., talks on their vocations before the class by successful men and women, and by investigations of local and near-by vocational opportunities and limitations.

11. Devote an occasional assembly period to a talk on some interesting vocation by an enthusiastic man or woman engaged in this life work.

12. Encourage pupils to work Saturdays and vacations in trying out occupations which they think they might prefer for life vocations. Also, make use of agricultural clubs; have the boys who like woodworking assist the janitor or carpenter in minor alterations about the building; have the girls who are interested in nursing assist the school nurse; and those who are thinking of becoming teachers help the grade teachers in some of their work.

13. Organize a placement and follow-up bureau for pupils who wish to work afternoons, Saturdays, and vacations; for those who must leave before completing the course; and for those whose formal education is completed at graduation.

14. Arrange conferences with members of the third and fourth year pupils to discuss what they expect to do after leaving high school.

VI. ORGANIZATION OF VOCATIONAL GUIDANCE IN TYPICAL CENTERS.

As at present carried on the organization of vocational guidance varies widely from city to city. In Boston the private vocation bureau work has developed into a public system of bureaus and counselors working through teachers in the public schools. In Grand Rapids the plan of vocational information through English courses gradually extended and developed contracts with public and private agencies outside the schools. In New York a system of volunteer high-school committees on the one hand, and a series of labor exchanges on the other, are gradually working out into something that may eventually become a city-wide plan of guidance and placement, in touch alike with the schools and the industries. In Cincinnati a privately endowed vocation bureau has become the guidance, research, and placement office for the entire school system. In a number of smaller cities, especially in the West, the teachers have developed plans for guidance, suited to less complicated situations on the basis of experience in the larger places. Each community has its own special problem, but can usually find help in its solution through the experience of some other community of similar size and location. In order that the plans now in operation may be available in the briefest possible compass, descriptions of vocational guidance organization in typical centers are here given.[1]

BOSTON.[2]

Susan J. Ginn, Director of Vocational Guidance.

The Boston organization consists of a department of vocational guidance in charge of a director with two vocational assistants, one temporary vocational assistant, and two clerks. The Boston Placement Bureau, formerly financed by private funds, was taken over by the school committee in 1917.

The central office, in charge of the director, serves as a coordinating agency to bring together information about successful practices throughout the city.

[1] Much of the work is so new that printed statements are not available. Brewer gives the most recent information. The statements in this chapter are based mainly on correspondence, personal visitation, or recent issues of the Vocational Guidance Bulletin.

[2] For a description of the Boston Vocation Bureau see ch. 2. This bureau was transferred in the fall of 1917 to the Vocation Bureau of Harvard University at Cambridge. Accounts of the Boston work are given in the reports of the superintendent of schools for 1915–16–17.

It has been described as a "clearing house for experimentation methods and ways and means." Under the auspices of the central office, conferences are held in which teachers from the high schools and elementary schools take part. The workers in the central office are engaged in three types of work—investigating occupations, giving counsel to pupils and working children who call at the office, and aiding in the placement of high-school students and graduates. Considerable educational guidance is undertaken by the department,[1] the theory being that with high-school attendance assured, the problem of the vocational counselors in the elementary schools becomes largely that of aiding the child in its selection of a high-school course.

Every high school and elementary school in Boston has vocational counselors. These are teachers who have had special training for counseling under the Boston Vocation Bureau, Harvard University, or Boston University. They serve without extra compensation.

In the Boston high schools there is a definite system of placement, coordinating through the central placement bureau. During the closing weeks of the school year, members of the staff interview personally each pupil in the graduating classes. In most of the schools two or three teachers are allowed part time for counseling individuals. Part-time work, especially in department stores and during the summer vacation, is utilized for guidance purposes.

CINCINNATI VOCATION BUREAU.

Mrs. Helen T. Woolley, director.

Three separate offices make up the vocation bureau of the Cincinnati public schools—the employment certificate office, the placement office, and the department of research.

The employment certificate office secures for each child the necessary birth record, health record, school record, and contract of employment required under thee child-labor law. It cooperates with the board of health in securing birth records from the bureau of vital statistics and health records from the district physicians. It cooperates with the department of attendance and the factory inspectors in enforcing the child-labor law.

The placement office is the agency for securing positions. It seeks to have the children come to its officer, the placement secretary, before they take the step of getting first positions for themselves. For each child who applies for help, the secretary secures a report from the school on scholarship, character, and personality. The schools have introduced a record card to be filled out by each teacher of the last four grades, so that the office may have the advantage of several independent judgments with regard to each child. In addition to this information the secretary secures as full a statement of family conditions as possible from each candidate. In cases where a laboratory test promises to be of use, the secretary can obtain it by request. After the child is placed the secretary secures from the employer a report on his progress each month for the first three months and at longer intervals afterward. If the employer has complaints to make the secretary summons the child to the office and confers with him about it. In many instances it is possible in this way to secure the attitude in the child necessary for success. If this does not prove possible the child is transferred to some other position, and the secretary tries to find a more suitable candidate for the employer. In attempting to straighten out difficulties and bring pressure to bear upon the child, the homes of many of the children are visited by a representative of the office.

[1] According to Brewer.

The distinguishing feature of the research department is the psychological laboratory, which serves as a child-study department for the public schools. The laboratory was originally established in the first place to investigate the problem of child labor. In addition, the laboratory has been carrying on the following activities:

(*a*) The laboratory has been designated as the regular channel for defective children. School principals who have children who are apparently defective refer them to the laboratory for mental examination. There are also observation classes that attack the problem of retardation in the first and second grades of school.

(*b*) Some of the children sent as defectives prove to be merely retarded. In many instances they are so badly retarded that they can be diagnosed as children of distinctly inferior mental capacity, who will never be able to profit by very much academic training. Such children always leave school as early as they are allowed. In view of these facts, the office has begun to recommend that mentally retarded children of 13 years or more be placed in industrial classes.

(*c*) An order has been issued that all candidates for the so-called opportunity classes shall be assigned through the office, on the basis of mental tests. The opportunity school is intended for children who have become retarded through causes other than mental inability. Such causes may be (a) illness, (b) lack of educational opportunity, or (c) kind of teaching unsuited to the child's temperament and interests.

(*d*) The schools have now begun to establish rapidly-moving classes for superior children. A mental test is one element in establishing superiority, and the vocation bureau makes the test.

(*e*) The laboratory is making a study of the students who fail in first-year high school.

(*f*) The laboratory has made a complete survey of one class of retarded children. These children had been selected by the teachers and principals from the fourth and fifth grades as overage, but not defective, children who could profit by particularly skilled teaching. It proved that about one-third of the class were high-grade defectives. These children were transferred to the school for defectives. About one-third were definitely inferior children who were recommended for industrial classes. About one-third were normal children who had been retarded by illness, irregularity of attendance, poor advantages in earlier years, overwork outside of school hours, or exceedingly bad living conditions. For the latter group the skilled teacher is expending most of her effort. The assistance of social agencies, such as the Anti-Tuberculosis League and the Big Brothers Association, has been called into play, and every effort is being made to retrieve the educational retardation of this normal group.

(*g*) In one instance a survey of a small school was made. Not every child in the school could be tested, but a sufficient number to indicate the nature of the problem which the school had to meet. Although situated in a fairly good residence suburb, there was a great deal of educational retardation in the school. It proved that there was comparatively little mental retardation among the children. Since home conditions in the district were fairly good the conclusion suggested was that the fault lay with the school. The teaching in some of the grades had been poor, the standards in many instances unreasonably rigid, and the teaching force unprogressive. The school is being reorganized and modernized.

(*h*) Many children are referred to the laboratory by private agencies with requests for advice as to an educational program. The Jewish Charities made a systematic study of its children. Other agencies for whom children and

adults have been tested are the Juvenile Protective Association, the Juvenile Court, the Anti-Tuberculosis League, the Children's Home, the State-City Labor Exchange, the Bureau of Catholic Charities, and the Associated Charities.

GRAND RAPIDS, MICH.[1]

Jesse B. Davis, principal, Central High School.

Seventh and eighth grades.—The vocational guidance work of the seventh and eighth grades is taught in connection with English and geography; and all of the exercises are for composition, either oral or written. They cover such subjects as occupations, simple biography, and the value of an education.

Some of the subjects under the study of occupations are the following: (1) The study of a home occupation; (2) this occupation compared with the same occupation in foreign countries; (3) the account of a trip through some manufacturing plant, office building, or store.

A few subjects under the study of biography are these: (1) The life of a successful celebrated person (usually read to the class by the teacher). (2) The life of a successful person whom the pupil knows. (3) The life of the pupil himself.

Sample subjects that may follow the pupil's life are as follows. (1) How I earned my first money; (2) how I spend my Saturdays; (3) my first real work.

To show the value of an education, the following subjects are used: (1) A talk by some young person who has returned to school after being out for a period, on "Why I left school," or "Why I came back to school;" (2) what people I know say about the value of an education; (3) what I could do if I left school now; (4) what other young people have done who have left school at the end of the eighth grade; (5) wages of eighth-grade graduates compared with the wages of high-school graduates.

Ninth grade.—In the ninth grade the study becomes personal, and enters into more elaborate biography. Typical exercises are as follows:

My ancestors: Where they came from; why they came to this country; whether or not they had to contend with hardships; what they have done here.

My parents: Early life; hardships; occupation, its difficulties and advantages. What have they done for their children?

Myself: My childhood; my school life; any uncommonly good fortune, or bad, that has befallen me; my pleasures; my favorite studies; my ambitions; my health, etc.

Among the biographies most used in this grade are those of Helen Keller, Jacob Riis, Booker T. Washington, Phillips Brooks, Jane Addams, Alice Freeman Palmer, Mary Lyon, and Thomas Edison.

Tenth grade.—In the tenth grade a number of occupations are listed at the suggestion of members of the class; then each pupil presents one orally, or in written composition, helped in his preparation by means of an outline. Sometimes this offers opportunity to do research work. One girl listed 350 occupations for women, and the salaries paid each. Her method was to take the lists of the telephone directory and call up the people whose names she found, and then to ask what she wanted to know. Ingenuity will invent other methods. Others obtained their facts from relatives or friends who knew the occupations.

In the second half of this year some of the pupils will be ready to study some occupation that they expect to enter. An outline is usually given by the

[1] This description is based on the statement in Educ. Bul., 1917, No. 2. Some changes have since been made in the plan.

teacher to aid the pupil in his investigations. The following is an example: My own vocation—(1) Origin or history, (2) modern conditions (as in preceding outline), (3) good points and bad points (degree of independence, permanence, importance, remuneration—money or pleasure in the work itself, or in social returns), (4) how to enter it (preparation, cost, length of time, for study), (5) characteristics necessary to success.

Eleventh grade.—In the eleventh grade preparation for vocations is considered. Schools and colleges are studied—the industrial, professional, and purely literary schools; art schools, manual training schools, schools for physical training, etc. Each pupil is expected to take a special interest in some school and look it up through its catalogues and by interviews with graduates, and compare it with other schools of the same kind. The small college versus the large, coeducation versus separate schools for men and women, eastern colleges versus western, native versus foreign—all of these are used as subjects for discussion and debate. The subjects required for college entrance and other conditions are ascertained and pupils' own programs inspected to see whether their own work is properly mapped out to satisfy the colleges.

In the second half of the year the ethics of the vocations are considered. Girls who are not going to college and have no special choice study problems of domestic life—the relation of mistress and servant, expenditure, treatment of clerks in the stores, proper dress, and buying good articles in providing household supplies. Those who have definite plans consider the moral codes of the professions and business life. Here are debated the ethics of the Consumers' League, Anti-Saloon League, and other leagues for the betterment of social conditions.

Twelfth grade.—When the occupations of the business and professional world have been studied, some effort is made to single out for special study those which are distinguished as supported by and for the people because they are necessary for the public wellbeing and the betterment of society. Public institutions maintained by taxes supply subjects for the first half year, and those maintained by subscription for the second. At the close of the year the student prepares a manuscript based on his reading, visits to institutions, and interviews.

NEW YORK.

Three of the plans of vocational guidance in New York are as follows:

The Vocational Guidance Association of Brooklyn.[1]—The Vocational Guidance Association of Brooklyn was organized for the purpose of encouraging the boys and girls of Brooklyn "to increase their efficiency and earning power." Three standing committees were constituted: A committee on vocational education to encourage the development of facilities for practical instruction; a committee on vocational guidance to collect and disseminate information in regard to opportunities for profitable work and the training which is required for success in the most promising employments; a committee on placement, to determine by experimental work the best methods of developing the machinery for connecting the training schools with the industries.

In January, 1916, the placement committee employed a special agent. The committee decided to select a few typical schools to carry on some experiments to determine the possibility of making for students leaving schools direct connection with employing agencies without any loss of time or waste of energy

[1] "Vocational guidance through the school." Printed for the association by the boys of the Ben Franklin Club of the Boys' High School, Brooklyn, N. Y. (1917).

and to eliminate the deteriorating effects of drifting about from one employment to another and to determine the best methods of providing for supervised employment for young people in their immaturity. The principals of the schools were advised of the intentions of the committee and after they had accepted the proposed plans, application was made to the educational authorities for permission to undertake active operations.

The following is a report of the vocation office for October, 1916:

Prescriptions for new applicants, boys, 63; girls, 42; total	105
Placed in positions, boys, 57; girls, 28; total	85
Replaced to enlarge experience, boys, 6; girls, 14; total	20
New employers interviewed during the month	19
Homes visited to persuade parents to keep children longer in training	4
Meetings and conferences held	3
Special employment reports prepared	2
New members enrolled, associate, 6; active, 52; total	58
Special plans for continued education	22
Vocation bulletins sent to inquirers	84
Total placements to date	732

The trade extension rooms.—What is known as the "trade extension rooms" began in February, 1915, through the establishment of cooperation between the Julia Richman High School and the Manhattan Trade School on the one side and a number of agencies interested in working women on the other. Beginning with the intention of furnishing to unemployed office assistants and trade workers a profitable use of unemployed time, later the undertaking developed into an experiment whereby inexperienced and untrained girls were given special work tests designed to show individual adaptability to various trade processes and further aid of academic tests and physical examinations. The results of these tests were studied for the purpose of guiding the individual in further educational and vocational development.

During the month of April, 1915, a series of vocational and physical tests was instituted, based on investigations made by Thorndike, Ayers, and others. By September, 1915, tests for the commercial department included the following divisions:

(*a*) *Elementary scholastic tests.*—Penmanship, spelling, arithmetic, English.

(*b*) *Technical subjects tests.*—Stenographic dictation, typewriting, bookkeeping.

(*c*) "*Psychological tests.*"—Attention, substitution, habit formation, "general intelligence," etc.

In the industrial department the tests consisted almost entirely of graded work processes from the needle, machine operating, and pasting trades. In both departments the results indicate a very definite relation between the general intelligence and special fitness of a girl for the work in question and her performance during the tests.

Since February 1, 1917, groups of pupils in the eighth grade of the elementary schools of six districts have spent full time for a period of two weeks in rotation, doing the graded work prepared for them at the trade extension rooms. During the term approximately 1,000 children will have been submitted to the tests. The work is expected to serve as a practical try-out of the children's capacities for various kinds of office and trade work. As these tests become standardized, so that the pupils' responses to them may be interpreted with facility and with confidence, they should properly be adopted by the schools themselves. In the meantime the experience the pupils obtain is of undoubted value for the purposes of vocational guidance.

Over 30 employment bureaus and settlements are now cooperating with the trade extension rooms, and the list of affiliations is steadily growing.

Public Schools Numbers 12 and 147.—The work with the children in these schools is conducted under the supervision of the House on Henry Street, a short distance away. Both schools are in the heart of the lower east side, the one for girls and the other for boys. The Vocational Guidance Bureau is an outgrowth of the activity of the mayor's committee on unemployment, organized at a time when it became necessary to afford relief to the children of the striking garment workers, in the spring of 1916.

A worker from the House on Henry Street examines the pupils' record cards and selects the names of those who will be 14 years of age or over during the school term. The cards of these children are made the subject of special study, the child is interviewed, home conditions are inspected, and a complete history of each individual is obtained. As often as becomes necessary, a conference of teachers of these children is called for the discussion of traits and aptitudes as well as future educational or vocational plans. Then the parents are consulted and the child is advised in the matter of the choice of a high school or of a vocation, in certain deserving cases scholarships being offered to enable the child to continue in school.

CHICAGO.

The Chicago Vocational Bureau was established in 1911 by the joint committee for vocational supervision, a committee organized by the Chicago Woman's Club, the Woman's City Club, and the Association of Collegiate Alumnae.

In 1913 the executive board of the joint committee was enlarged to include representatives from the vocational committee of the City Club, the Chicago Association of Commerce, the Chicago Woman's Aid, and representatives of industry. The first year, one worker was employed by the committee to make a study of industrial conditions and to advise and place boys and girls leaving school. At a later date another worker was added. From 1913 the staff of the vocational bureau numbered four workers. The salaries of two were paid by the joint committee, the third by the Chicago Woman's Aid, and the fourth by the Chicago Association of Commerce.

In March, 1913, the board of education took over the bureau to the extent of providing an office, with clerical assistance and telephone service. In March, 1916, the board of education took over the bureau entirely, and has appointed two vocational advisers.

The definite and immediate purposes of the vocational bureau as thus established are:

First. To study industrial opportunities open to boys and girls with respect to wages and the requirements necessary to enter an occupation; the age at which beginners enter the occupations; the nature of the work; the chances for advancement and development—in short, to gather the greatest possible amount of information regarding industrial conditions, in order to advise boys and girls and to give them a start in their careers as workers.

Second. To advise the children about to leave school and to urge them to remain in school when possible.

Third. When every effort to retain them in school has failed, to place in positions those children who need assistance in securing employment.

Fourth. To follow up and supervise every child who has been placed, advising him to take advantage of every opportunity for further training.

FALL RIVER, MASS.[1]

The work of vocational guidance was started at the Technical High School in 1915–16.

The following outline gives the principal directions in which beginnings have been made:

(*a*) Instruction of teachers.
(*b*) Introduction of the study of community civics and occupations.
(*c*) Placement and follow-up of pupils at work.
(*d*) Educational and vocational advice.
(*e*) A study of reasons for leaving school.
(*f*) A study of graduates who have attended higher institutions.
(*g*) Attempts to adjust the work of the school—
  (1) To meet local industrial needs.
  (2) To provide prevocational training.

Instruction of teachers.—Early in the current school year a member of the Harvard faculty was invited to address the teachers of the school on the subject of the aims of vocational guidance. This meeting was designed to encourage all the teachers to devote more thought to the possibilities of giving the present curriculum such a trend as to bring about a wiser choice of vocations on the part of the pupils. Discussions in faculty meetings followed from the interest aroused at that time and immediate results were secured in several departments. This was particularly true of the English and history departments and of some of the shop, household economics, and science courses. Later in the year another speaker was invited to address the faculty on the same subject, and the matter was kept alive by discussions and by encouraging teachers to visit schools where work of this kind is being carried on.

Introduction of the study of community civics and occupations.—All first-year classes are required to take a course in community civics, in which considerable stress is laid upon study of vocations.

For several years members of commercial geography classes have been asked to prepare a long paper on "The history of my father's vocation."

Various endeavors have been made by the school and by local organizations with a view to assisting students in making a choice of a higher institution or apprentice course. Under the auspices of the Fall River branch of the Association of Collegiate Alumnae, a pamphlet has been prepared which gives information concerning collegiate opportunities within the reach of young women who graduate from the Fall River high schools.

Each member of the graduating class has had one or more conferences with the principal or with a teacher who has been delegated to do this work. Advice has been given as to the choice of a college or of an apprentice course, and in some instances changes have been made in the pupils' program to insure the right kind of preparation for the course elected. Conferences are being held now with all members of the third-year class in order to determine whether they should change to the Classical High School for the last year of preparation, or what course should be pursued if they are to remain in the Technical High School.

Throughout the year frequent conferences have been held with students in every class, and whenever the case appeared to warrant it changes in individual programs or adjustments have been made immediately. The utmost freedom has been exercised in changing pupils from one course to another where it was obvious that the failure was due to lack of talent for the work and not to laziness or inattention.

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[1] From a paper by Roy Kelley, formerly principal of the Technical High School, now director of the vocation bureau, Harvard University.

A study of the reasons for leaving school.—When pupils are absent for any length of time, or signify their intention to leave school, every effort is made to discover the real reason for leaving. Parents are urged to come to the school to talk with the principal or with the teachers whenever it appears that there is any likelihood of keeping a student in school.

Pupils entering higher institutions.—The Technical High School aims to discover the pupil to himself. It provides opportunities, both mental and manual, by which the pupil can test for himself his fitness and liking for the various openings in business and industrial life.

POMONA, CAL.

L. W. Bartlett, director of vocational guidance.

Vocational guidance as organized in the schools of Pomona, Cal., is based on the belief that if education is a preparation for life the essentials of vocations in which the pupils will find life should be emphasized throughout the entire period of preparation. To this end an effort has been made to bring industrial information into the lower grades through stories of industries, talks by representatives of vocations, etc.

The personal element is stimulated by means of a record card, which is used throughout the grades. Upon it are entered such items as qualities, aptitudes, environment, use of spare time, health, after-school plans, etc. The information for this large card is obtained from smaller cards which teachers fill out for all pupils every year and from personal interviews with the pupils.

In the high school speakers address the student body or groups of students, and in other ways the life motive is kept before the students.

To assist the pupil through this period a course in life career is given in the ninth year; and because many of the pupil's problems are individual each is given a personal interview.

There is another phase of vocational guidance in the Pomona schools that is meeting with good results. A great effort is being made to prevent the leakage from the schools. The problem is not so much to find jobs for those who drop out as to hold the pupils in school until better prepared for participation in vocational life. To this end each pupil who is thinking of leaving or who does leave is interviewed in an attempt to right the misunderstanding which is often the cause. Many are thus saved.

VII. RECENT ENGLISH EXPERIENCE AND ITS SIGNIFICANCE FOR THE UNITED STATES.

The present study has concerned itself almost wholly with vocational guidance and the public schools in the United States. Except for incidental mention the foreign developments have been disregarded, the system abroad having been carefully described in a previous bulletin of the Bureau of Education.[1] Recent English experience, however, has been so important and so illuminating in its lessons for the United States that a separate discussion will be given to it in this chapter.

On July 25 and 26, 1917, a conference was held at the Board of Education office in London on the Choice of Employment Act.[2] Those present included representatives and officers of local education authorities exercising or likely to exercise the powers conferred by the act. The object of the conference was—

> to consider the need for extending the work carried out under the act, which empowers local education authorities to make arrangements for giving to boys and girls under 17 years of age assistance with respect to the choice of suitable employment, by means of the collection and the communication of information, and the furnishing of advice.[3]

An all-important problem.—In his introductory address the Hon. H. A. L. Fisher, president of the Board of Education, described the problem before the conference as one of the most important in the whole sphere of educational endeavor. He said:

> There are, of course, some districts in England where this problem of drafting school children into industry solves itself. There are some towns where there is a predominant industry which naturally absorbs all, or the greater part, of the available child labor. The factory gates are open; industry is almost hereditary, and there is a constant and unimpeded flow of child labor from the schools into the factories.
>
> Whether this automatic process be desirable or not, I do not pretend to determine. But these districts are in a minority. In a very large part of England there is a great body of child labor which may be diverted either into this channel or into that channel according to the presence of a directing agency, and it is a matter of vital social importance that in every district

[1] Bloomfield, The School and the Start in Life. (Educ. Bul., 1914, No. 4.) See also the same author's Vocational Guidance of Youth.

[2] The English juvenile employment work is organized under two acts: The Labor Exchange Act of 1908 and the Education (Choice of Employment) Act of 1910. For the text of the two acts see Bloomfield, The School and the Start in Life.

[3] Great Britain, Board of Education. Papers read at a conference on the Choice of Employment Act. (Circular 1012, p. 3.)

where these conditions prevail there shall be an intelligent and watchful agency prepared to divert labor into those channels of work which are likely to be most fruitful, and to divert it from channels which lead nowhere and are likely to be barren.

The schools and the war.—Mr. Fisher emphasized the need for enlightenment of all classes of the public as to the value of education. He showed how industry had made inroads upon the schools at the outbreak of the war:

At the beginning of the war, when first the shortage of labor became apparent, a raid was made upon the schools, a great raid, a successful raid, a raid started by a large body of unreflecting opinion. The result of that raid upon the schools has been that hundreds of thousands of children in this country have been prematurely withdrawn from school, and have suffered an irreparable damage which it will be quite impossible for us hereafter adequately to repair. That is a very grave and distressing symptom. We even find magistrates up and down the country giving the weight of their authority to the proposition that children of 11 years of age may be safely withdrawn from school and drafted into industry on the ground that industry is a matter of national importance, and with the implication that education is not a matter of national importance.

THE WORK IN YORK.

Under the title of "Five Years' Work and Its Results," D. S. Crichton, chairman of the York juvenile employment committee, gave an account of the work in York since the opening of the Juvenile Employment Bureau in 1912. Mr. Crichton described the conditions in York and the functions of the Juvenile Employment Bureau as follows:

The population of the city of York is 82,282, of whom 14,193 are in attendance at the elementary day schools. The outflow of children from the schools is about 1,300 annually, so that there are about 4,000 children between 14 and 17 years of age in the city. The bureau is the means whereby the school system and the industrial system are to be linked up; its essential duty is to guide the school-leaving children with a view to their industrial employment. Its particular functions may be stated as follows:

(1) To advise boys and girls as to what work they are fitted for by their ability, tastes, character, and education.
(2) To supervise, if necessary, the young worker after he is placed.
(3) To give advice and information to children as to a proper course of further education.
(4) To gather information about local industries upon which to base advice to applicants for employment.
(5) To register applicants and bring them into touch with employers.

Work of the bureau.—Between 1912 and 1917 a total of 6,221 candidates for employment were handled by the bureau. Of the applicants, 3,088 made application either immediately on leaving school or within a year thereafter. The total number reported leaving school was 5,258, so that approximately 58 per cent of those leaving school sought work through the agency of the bureau. Mr. Crichton

points out that in more than 2,000 cases a parent accompanied the child in making inquiries about employment.

Some of the special investigations made by the York committee were as follows:

1. Inquiry as to which occupations are responsible for throwing boys of from 17 to 21 years of age on the labor market.
2. Employment of school children out of school hours.
3. Inquiries into the industrial careers of boys in relation to their standard of educational attainment.
4. Inquiries into the careers of applicants for employment who have reached the age of 16 years.
5. Juvenile employment after the war.

The conclusions reached by Mr. Crichton from the work in York are that the plan has undoubtedly given children and their parents better facilities for obtaining good employment; that it has, in general, satisfied the employers; that it has established lines of communication between the employers and the school authorities; and that it has become to a considerable extent an "intelligent department with regard to the requirements of adolescents and the possibilities of meeting these requirements."

THE AUTHORITY AND THE JUVENILE.

Duplication of authority in handling juveniles, and the ineffectiveness of optional provisions, were the main points in the paper read at the conference by Spurley Hey, director of education for Manchester. His contribution included a report of the Manchester inquiry into the out-of-school employment of school children and a suggested program for reconstruction.

Suggestions for reconstruction.—As the result of his experience with juvenile employment plans in three cities, Mr. Hey makes the following suggestions:

(1) That there should be one central authority (the Board of Education) and one local authority (the local education authority) for all matters relating specifically to the general education and training of juveniles from 3 to 18 years of age.

(2) That the powers of educational control and supervision now possessed by the home office, the local government board, the board of trade, in respect of such juveniles should be transferred to the Board of Education.

(3) That the transference of educational powers from certain Government departments to the Board of Education should be followed in the local areas by a similar transference of control and supervision to the local education authorities.

(4) That the adoption of the Education (Choice of Employment) Act, 1910, should be made compulsory upon all local education authorities.

(5) That the juvenile advisory committees, at present in operation, should be abolished or merged into choice of employment schemes.

(6) That choice of employment committees should, as a part of their duties, be required to formulate and carry into effect schemes for aftercare.

(7) That any new legislation set up to deal with day-continuation schools should be compulsory in character and subject to the administration of the Board of Education and the local education authority.

(8) That some development of evening-play centers is desirable on behalf of children who have left the elementary school, that such development should be on the lines of clubs, and that such facilities will be especially needed upon the introduction of any scheme of part-time compulsory day continuation classes.

(9) That legislation should be introduced making it illegal to employ children systematically for wages before 14 years of age; or, in the alternative, that the adoption of sections 1 and 2 of the Employment of Children Act, 1903, should be made compulsory upon all local education authorities.

UNDESIRABLE EMPLOYMENTS.

"The wider and deeper one's knowledge of trades and occupations becomes, and the more experienced one is in placing boys and girls in situations, the less one is inclined to make sweeping condemnations of particular employments or unqualified approval of others," Mr. H. Norwood, of the Birmingham central care committee, in his paper on "Undesirable Employments." Mr. Norwood described the more usual adverse features of employments under the heads of (1) Repetition work; (2) warehouse work, etc.; (3) errand and messenger boys; (4) dirty trades and occupations; (5) heavy work; (6) seasonal trades; (7) overcrowded employments; (8) miscellaneous undesirable employments.

"*Repetition work.*"—In Mr. Norwood's observation the worst feature of present-day juvenile employment is that "such a vast amount of it involves no graduated training over a reasonable period of time"; that most of the work is so limited in scope and monotonous in operation as to stunt growth. Mr. Norwood showed how necessary it is to be constantly warning parents of these facts, giving it as his opinion that "there is no more acute problem and no more discouraging experience to the juvenile employment office" than that of the constant stream of boys and girls 16 to 18 years of age who, having reached the end of their cheapness to employers at merely mechanical processes, come back to the employment office for new jobs.

Education through work.—Mr. Norwood concludes with a plea for more general recognition of the educational effects and possibilities of the boys' and girls' work. He says:

We are too apt to regard schooling as education and education as finishing with schooling, which, of course, is not the case. Properly considered, the boy on going to work changes the sphere and the means of his education. Some employments are much better than others from this point of view, but none is without effect. I hope that when the day part-time schools come, a determined effort will be made to secure the interest of the employers in the schools, and surely it is inconceivable that the school authorities will be indifferent to what

the pupils are doing in the works. The best can not be done for the boys and girls unless there is close coperation between the two, and coordination, so far as may be, between the education in the school and in the works. With a recognition of the bearing of the one on the other, and of both on the development of the powers of the boy, we may hope to see much-improved and better-planned schemes of training in the industries, whether apprenticeship in a modified form is revived or not, and we may further hope to see a saner regard for the physical, hygienic, and moral conditions in the works.

Demobilization and the juvenile workers.—The remaining papers at the conference were given over to the perils of demobilization, aftercare, and the application of the choice of employment act to rural areas.

In his paper on the perils of demobilization R. A. Bray, chairman of the London juvenile advisory committee, dealt with three questions: (1) Effects of the war on juvenile employment; (2) the problem of demobilization; (3) the part to be played by juvenile employment committees in assisting boys and girls to pass through the demobilization period with a minimum of danger.

Juvenile employment and the war.—Mr. Bray describes the war situation as it affects juvenile employment in the following words:

(1) With industry mobilized for war there has been a great change in the distribution of occupations among juveniles. Boys in numbers far beyond the ordinary have entered engineering shops and are engaged in producing munitions. Girls are similarly employed, and are also replacing boys in office and messenger work, while they have largely forsaken the ordinary women's occupations, such as dressmaking, millinery, and domestic service.

(2) There has, on the whole, been some decrease in the opportunities for training in the workshops. Boys and girls who would in ordinary times have entered an occupation with good prospects of learning a trade are taking up employment altogether uneducative. On the other hand, boys who would have become messengers and office youths are now engaged on work which, from the standpoint of education, is certainly not less, and possibly more, valuable than their normal employment.

(3) It will certainly be found that in the long run the health of the juvenile worker has suffered. Apart from the unsuitability of many of the new occupations, the long hours and the frequent night work of those engaged on munitions are a serious strain on the boy and the girl.

(4) The war has made life very difficult for the youthful workers, and their character has suffered.

Demobilization.—For juvenile workers demobilization will render change of occupation necessary on a large scale, in Mr. Bray's view. Mr. Bray anticipates that in certain districts a third or even more of the boy and girl workers will be discharged and forced to seek new employment. He foresees particularly the following dangers that must be recognized and met:

(1) There will be the danger of juvenile unemployment on a large scale, with the demoralization that necessarily accompanies such unemployment.

(2) There will be difficulty in boys who have been engaged on munitions obtaining employment. On the one hand, employers, familiar as they are with

the lack of training and the absence of discipline which distinguish such boys, will be reluctant to engage them. On the other hand, the boys themselves, accustomed as they have been to high wages and to a practically unlimited demand for their services, will not readily accept employment at the lower rates of wages which must necessarily follow the termination of the war.

(3) There will be danger of the boys and girls, if left without assistance, taking up work for which they are not best suited. On the one hand, there will be the tendency in accentuated form to judge the value of a vacancy by the pecuniary advantages offered. On the other hand, in the case of those who may be experiencing the pinch of economic pressure, there will be the tendency to accept the first work that offers in order to start earning at the earliest possible moment. The danger of unguided choice during demobilization is serious.

(4) There is the danger to the children leaving school during the period of industrial dislocation following the war.

Measures to meet the dangers.—Mr. Bray gives an elaborate analysis of the measures that will be necessary to meet the perils of demobilization as they affect juvenile workers:

(1) The first essential in all preparation lies in the task of securing in every district an active juvenile employment committee.

(2) The first duty of an active committee will be to enlist the services of a body of volunteers drawn from the chief social organizations in the district.

(3) Preparation for dealing with the problem of demobilization requires the establishment of close relations between the juvenile employment committees and the employers. Each committee should, in cooperation with the employment exchange, organize systematic visiting of the employers of the district.

(4) Relations should be established between juvenile employment committees and the welfare and health section of the ministry of munitions.

(5) During demobilization every effort should be used to induce children, free to leave school, to continue in attendance.

Leaflets should be issued to teachers explaining the consequences following a dislocation of labor on a large scale, the difficulty of children obtaining suitable employment, and the uncertainty of obtaining employment at all.

(6) Juvenile employment committees must have ready prepared a definite scheme for dealing with the large numbers of boys and girls who will be displaced.

VIII. SUMMARY AND CONCLUSIONS.

Vocational guidance as a modern movement has been traced in this report through the educational meetings of the past dozen years, through the more important studies of school leaving in relation to employment, made usually with vocational guidance motives, through the developing literature of the occupations, which has made available the kind of information necessary for reliable vocational direction, and through the concrete efforts to set up adequate machinery for vocational guidance in a number of communities.

Those who have watched the vocational guidance movement have seen it broadening out until, originally signifying little more than the giving of limited counsel to individual seekers for employment, it has come to mean an important program affecting fundamentally both education and industry. Educationally, vocational guidance is bound up with vocational training, prevocational education, continuation school work, the cooperative plan of half-time work, the Gary plan, and the junior high school, and, like most of these, it presupposes a complete remaking of education on the basis of occupational demands. Industrially it involves placement, employment supervision, specific attention to such problems as labor turnover in industry, and the education of employers and the public to the possibilities of guidance as a public function to be carried out through the school.

The studies of school leaving and employment were considered in some detail in this report, because it is largely from them that the vocational guidance movement derives its inspiration. These studies are in entire agreement in showing that the untimely entrance of boys and girls 14 to 16 years of age into industry is due mainly to dissatisfaction with school and to economic pressure, the latter cause occupying a much less important place than popular opinion assigns to it. Both causes suggest the school's responsibility and opportunity in guidance. They indicate the need for educational guidance that will keep the boy and girl longer in school; they call for a modification of school programs and school methods and an expansion of continuation school work; they imply the need for a still more general form of vocational enlightenment that will make parents and children see that inability to "afford" adequate education for life is on a par with inability to pay for proper food, cloth-

ing, and shelter to maintain health. The studies of school leaving and employment are further in agreement in showing that with few exceptions the occupations open to boys and girls 14 to 16 years of age are of the sort that provide no advancement beyond the lowest living wage.

The need for guidance established, the next step was constructive studies of the occupations. Census material was interpreted and utilized; vocational pamphlets were prepared after consultation with employers and workers and after investigation of the occupations. Federal and State Governments and private foundations published studies of conditions in the trades. Later, vocational surveys, made to secure a proper basis for a program of vocational training, began to go into the analysis of occupations and processes, thus furnishing invaluable material for an understanding of the requirements for positions. This has led to a wealth of reliable information in accessible form superior to anything available before, and has made possible an approach to industry by the school that would have been inconceivable a few years ago.

School use of this newer vocational material is a problem on which vocational guidance is now working. At least four direct methods of presenting vocational information to pupils are recognized—through vocational talks, through vocational pamphlets, through English and civics classes, and through the "life-career class" in vocations. More important still is the utilization by the school of occupational data as the basis for curricular adjustment and content material in all subjects, from the lowest to the highest school grade.

Examination of guidance plans in typical communities shows little uniformity. In Boston, vocational guidance under private auspices furnished pioneer training, research, and propaganda service, leading to the establishment of what is now a fairly complete organization of guidance as part of the public-school system, under a qualified director. In Cincinnati research has remained the dominant note. In New York, volunteer agencies have been largely depended upon, and the emphasis has been upon placement. Grand Rapids continues to serve as a model for many communities, the plan for vocational information through English courses being adaptable to nearly every type of school system. Chicago has taken over officially the placement work formerly carried on in cooperation with philanthropic agencies. Boston is still the only city of any size that has a vocational counselor in every school.

CONCLUSIONS.

A survey of the field leads to the following conclusions:

1. Vocational guidance in the public schools is not to be confined to individual counseling by a vocation bureau or by a teacher, but is

to be regarded as a movement having as its purpose a better distribution of human service. It implies broadening the program of studies to include a systematic study of the industrial organization of society. "The thought of vocational guidance must live in every phase of educational work from its earliest beginnings."

2. Study of individual aptitudes has made relatively slow progress. Vocational psychology, while of high promise to the vocational guidance movement, is not yet regarded, even by psychologists, as of much direct value in any system of vocational guidance for schools.

3. It is in the field of occupational information that most progress has been made. The important developments in this field have made possible a variety of successful plans for imparting vocational information to pupils in school.

4. The most hopeful next step in guidance work is the interesting of teachers in the world of occupations. A program of vocational guidance for any school system implies teachers who are familiar with the history of modern industry, who have studied social movements, and who believe in the worthiness of all human service. Teachers are logical agents of society in making its work known.

5. The general public will need to be educated to the importance of schooling, and particularly to the necessity of differentiated courses. Employers and labor leaders will need to be utilized as cooperating factors in bringing the school and industry together in such a way as to result in better industry and a better school.

6. Systems of vocational guidance for large cities will usually grow out of vocational education, though they should not be allowed to be subordinated to it. An assistant superintendent or a special director should be in charge and should have considerable latitude in regard to making suggestions for other departments of the school system. In smaller cities vocational guidance will be one of the chief functions of the superintendent.

7. Communities initiating systems of vocational guidance should be particularly careful to use the services of existing social agencies. Vocational guidance touches so many phases of human life and labor that practically every social agency can make some contribution to it.

8. Vocational guidance has special significance for the United States in the light of problems raised by the war. Notwithstanding the repeated warnings given by England and France, entirely too many boys and girls are leaving school to go into industry because of the lure of high wages. The school should do its best to keep as many as possible. Over those who go into employment it should exercise supervision, following them up in the hope of reclaiming some of them for education when the war employment is past. The school can route many of the boys into more permanent lines of work, and can emphasize the value of training both for temporary

war service and for the reconstruction period after the war. To help effectively in this movement the schools must establish contacts few of them now have with labor unions, employers, and the general public. It is only by being thus equipped that the public schools can take the leadership in a movement as fundamental as that for vocational guidance, which has within it the possibilities for a complete reorganization of industrial and social life.

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Vocational training. A classified list of institutions training educated women for occupations other than teaching. Prepared by the Committee on Vocational Opportunities for the Association of Collegiate Alumnae. 1913.

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Ayers, Leonard P. Psychological tests in vocational guidance. New York City, Division of Education, Russell Sage Foundation, 1913. 6 p. 8°. (Russell Sage Foundation. Pamphlets. E 128.)

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Blackford, Katherine H., *and* Newcomb, Arthur. Analyzing character. The new science of judging men; misfits in business; the home and social life. New York, The Review of Reviews Co., 1916. 488 p. illus. 8°.

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Clippinger, Virginia. Arbiters of fate. Unpopular review, 9: 368–72, April–June, 1918.

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Halsey, George D. The "averaged-opinion" plan of vocational guidance. (Special Bulletin No. 2, The Vocational Bureau, Atlanta, Ga., 1917.)

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Hollingworth, H. Vocational psychology. New York, D. Appleton, 1916.

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Kemble, William Fretz. Choosing employees by mental and physical tests. New York, Engineering Magazine Co., 1917.

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Merton, Holmes, W. How to choose the right vocation. New York, Funk & Wagnalls, 1917.

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——— Finding a life work. McClure's Magazine, 34: 400–403, February, 1910.

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——— Vocation and learning. St. Louis, 1912. 289 p.

Ruger, George J. Psychological tests: A bibliography. (Supplement to Jan. 1, 1918.) New York, Bureau of Educational Experiments, 1918.

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Sackett, R. C. Practical psychology applied to telephone operators. Michigan Schoolmaster's Club. Forty-ninth meeting, April, 1914. p. 96–104.

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Schneider, Herman. Selecting young men for particular jobs. National Association of Corporation Schools. Bulletin, 7: 9–19, September, 1914.

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Simpson, B. R. Reliability of estimates of general intelligence, with applications to appointments to positions. Journal of Educational Psychology, 6: 211–20, April, 1915.

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——— The psychological laboratory as an adjunct to a vocational bureau. Second Vocational Guidance Conference, New York, October 23–26, 1912. Proceedings, p. 84–88.

——— and Fischer, Charlotte Rush. Mental and physical measurements of working children. Princeton, N. J., Psychological Review Co., 1914. (Psychological Monographs, Vol. 18, No. 1, December, 1914.)

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12. *Material on Occupations.*[1]

Abbott, Edith. Women in industry. New York, D. Appleton & Co., 1916.

A comprehensive history of the employment of women from the earliest times to the present. Important background book for vocational guidance.

Allen, Frederick J. Business employments. Boston, Ginn & Co., 1916. 218 p.

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——— The employment manager movement. (Vol. 65, No. 154.)

Ayres, Leonard P. Constant and variable occupations and their bearing on problems of vocational education. New York City, Division of Education, Russell Sage Foundation. 11 p. 8°. (Russell Sage Foundation. Pamphlets E 136.)

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——— Some conditions affecting problems of industrial education in seventy-eight American school systems. New York City, Division of Education, Russell Sage Foundation. Pamphlets, E 135.)

A study of the occupations of the fathers of American boys. Helpful in an understanding of occupation distribution. Also in Bloomfield's "Readings."

[1] This is a narrowly selective list. It aims to include on the one hand such studies of occupations as will help teachers to get a view of industrial conditions, especially as revealed in rather inaccessible special reports and, on the other hand, such of the books on vocations, written from the vocational guidance viewpoint, as are most useful and reliable.

Barnes, Charles B. The longshoremen. New York, Survey Associates, 1915. 287 p.

A sympathetic, discriminating picture of the labor conditions of an important group of workers in coast towns.

Boston Vocation Bureau. Vocations for Boston girls. Bulletins, 1911–12.

This series includes telephone operating; bookbinding; stenography and typewriting; nursery maid; dressmaking; millinery; straw hat making; manicuring and hairdressing; nursing; salesmanship; clothing machine operating; paper box making; confectionery manufacture; knit goods manufacture.

Boston. Women's Educational and Industrial Union. Appointment Bureau, 264 Boylston Street. Vocation series. Bulletins, Nos. 1–14, March, 1911–April, 1912.

Boston Finance Commission. Report of a study of certain features of the public school system of Boston, Mass. Boston, City of Boston Printing Department, 1916.

Occupational needs in Boston are described, p. 126–43.

Bryner, Edna C. Dressmaking and millinery. Philadelphia, William F. Fell Co., 1916. (Cleveland Education Survey.)

——— The garment trades. Philadelphia, William F. Fell Co., 1916. (Cleveland Education Survey.)

Butler, Elizabeth B. Saleswomen in mercantile stores. New York, Charities Publication Committee (Russell Sage Foundation), 1912.

A study of Baltimore stores, made in 1909 for the Consumers' League of Maryland.

Cincinnati. Chamber of Commerce. Industrial survey of Cincinnati: Vocational section. Printing trades. Cincinnati, Chamber of Commerce, 1915. p. 141. 8°.

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——— Garment making industries. Cincinnati Chamber of Commerce 1917. p. 113.

A constructive statement of the advantages and drawbacks of the garment-making trades. One of the type of newer studies that are indispensable to vocational guidance workers.

Cleveland Foundation. Cleveland survey. 1916.

The following nine volumes on occupations are convenient hand books for counselors: Garment trades (Bryner); Dressmaking and millinery (Bryner); Railroad and street transportation (Fleming); Metal trades (Litz); Department store occupation (O'Leary); Building trades (Shaw); Printing trades (Shaw); Commercial work (Stevens); Wage earning and education (Summary volume).

Commission on Industrial Relations. (U. S.) Washington, D. C. Final report. Chicago, Barnard and Miller Print, 1915.

Well-presented material on labor conditions.

Consumers' League of Eastern Pennsylvania. Occupations for girls. Three pamphlets: (1) Paper-box making; (2) Telephone operating; (3) Bookbinding. Philadelphia, 1913.

Davis, Anne. Occupations and industries open to children between 14 and 16 years of age. Chicago, Published by Board of Education, 1914.

Dodge, Harriet Hazen. Survey of occupations open to the girls of 14 to 16 years. Boston, Mass., Girls Trade Education League, 1912.

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Dwight, Helen C. The next chapter in child-labor reform. Child Labor Bulletin, 5: 154–160, November, 1916.

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Eaton, J., *and* Stevens, B. M. Commercial work and training for girls. New York, The Macmillan Co., 1915. 289 p.

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Fitch, John A. The steel workers. New York, Russell Sage Foundation, 1910.

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Fleming, R. G. Railroad and street transportation. Philadelphia, William F. Fell Co., 1916. (Cleveland Education Survey.)

Gowin, Enoch Burton, *and* Wheatly, W. A. Occupations. New York, Chicago, etc., Ginn & Co., 1916.

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Gruenberg, Benjamin C. What's in a job? Scientific Monthly, September, 1916.

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Hyde, William De Witt, *ed.* Vocations. Boston, 1911.

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——— ——— Report of the Richmond vocational survey. Vocational Survey Series No. 3, 1916.

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Kober, George M., *and* Hansen, William C. The diseases of occupation and vocational hygiene. Philadelphia, P. Blackiston's Sons & Co., 1916. 918 p.

A cyclopedia of vocational hygiene.

Laselle, Mary Augusta, *and* Wiley, Katherine E. Vocations for girls. Boston, Houghton Mifflin Co. (c1913). 139 p. 12°.

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Designed to furnish a fact basis for the consideration of vocational education and the development of vocational and industrial courses in Indiana.

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——— An investigation of the paper-box industry to determine the possibility of vocational training. New York State Factory Investigating Commission. Albany, J. B. Lyon Co. p. 1243–1346.

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——— Some facts concerning the people, industries, and schools of Hammond, Ind. Indiana, State Board of Education. Publications.

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——— The occupations of boys and girls in Davenport, and their bearing on vocational education. Midland Schools, 29: 199–200, March, 1915.

A study of occupations in a small city.

——— Occupations of the graduates of the college of liberal arts, State University of Iowa. Midland Schools, 29: 10–11, September, 1914.

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——— The prevailing occupations of Iowa in relation to the problem of vocational education. Midland Schools, 29: 75–76, November, 1914.

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Martin, E., *and* Post, M. A. Vocations for the trained woman. Boston, Women's Educational and Industrial Union, Department of Research. Studies in the economical relations of women. Vol. 1, pt. 2.

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No. 3. Dangers to workers from dusts and fumes, and methods of protection. (Bulletin 127.)
No. 4. Lead poisoning in the smelting and refining of lead. (Bulletin 141.)
No. 5. Industrial accident statistics. (Bulletin 157.)
No. 6. Lead poisoning in the manufacture of storage batteries. (Bulletin 165.)
No. 7. Industrial poisons used in the rubber industry. (Bulletin 179.)
No. 10. Anthrax as an occupational disease. (Bulletin 205.)
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No. 12. Hygiene of the printing trades. (Bulletin 209.)

Vocational Education:

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No. 6. Short-unit courses for wage earners, and a factory-school experiment. (Bulletin 159.)
No. 7. Vocational education survey of Richmond, Va. (Bulletin 162.)
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No. 2. Wages and hours of labor in the lumber, millwork, and furniture industries, 1890 to 1912. (Bulletin 129.)

No. 3. Union scale of wages and hours of labor, 1907 to 1912. (Bulletin 131.)

No. 4. Wages and hours of labor in the boot and shoe and hosiery and knit goods industries, 1890 to 1912. (Bulletin 134.)

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No. 2. Working hours of women in the pea canneries of Wisconsin. (Bulletin 119.)

No. 3. Employment of women in power laundries in Milwaukee. (Bulletin 122.)

No. 4. Hours, earnings, and conditions of labor of women in Indiana mercantile establishments and garment factories. (Bulletin 160.)

No. 5. Summary the report on condition of woman and child wage earners in the United States. (Bulletin 175.)

No. 6. Effect of minimum-wage determination in Oregon. (Bulletin 176.)

No. 7. The boot and shoe industry in Massachusetts as a vocation for women. (Bulletin. 180.)

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——— Department of the Treasury. Public Health Service. Studies in vocational diseases. Washington, Government Printing Office, 1915. Bulletin No. 71.)

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APPENDIX A.

TYPICAL JOB ANALYSES FROM THE RICHMOND AND MINNEAPOLIS VOCATIONAL EDUCATION SURVEYS.

RICHMOND.

TINSMITHING OR SHEET-METAL WORK.

Processes.—The work of the tinsmith or sheet-metal worker consists of the laying out of tin or other sheet-metal utensils, the forming and making of waterspouts and the erecting of the same, the bending of lock joint by use of folder or brake, and the laying of tin on roof and the closing of the joint by use of the mallet and seamers, or roofing tongs. The tinsmith or sheet-metal worker erects metal ceilings and side walls, furring and sheathing same, makes crestings, awnings, hollow circular moldings, and metal sash frames and skylights, and covers fire doors and windows.

ELECTRICAL WORK.

Processes.—The electrical worker in Richmond performs perhaps a wider variety of operations than any other trade worker. Electrical work may be roughly divided into three general classes—electrical apparatus work, outside wiring, and inside wiring.

Electrical apparatus work.—Under electrical apparatus work is included the manufacture of all electrical machines, instruments, and devices. This work is so varied and widely differentiated that no brief description can cover it in full detail; in general, however, it may be said to consist of all the skilled electrical work required to be done in the manufacture or repair of all forms of electrical apparatus, such as generators, motors, electric meters, rheostats, telephones, switchboards, and testing and signal apparatus.

Outside wiring.—Outside wiring consists of the installation of all outdoor lines and includes such work as general electrical power transmission lines, street lighting, telephone, telegraph, and signal lines. There are two general types of outside wiring—aerial, in which the wires or cables are supported high in the air on poles or other suitable devices, and underground, in which the wires or cables are laid in conduits.

Inside wiring.—Inside wiring consists of the preparing for and putting up of electric wires for all purposes, so long as the work is done within the confines of some structure. The installation of the appliances and fixtures for which the wires are run is also generally included in the inside wireman's work. This includes such work as lighting, heating, power, telephone, bell, and signal installation. There are four general types of inside wiring: Open work, in which the wires are exposed to view and are mounted on cleats or knobs; molding work, in which the wires are run in a special molding, made either of wood or metal; concealed work (knob and tube), in which the wires are run in partitions and other places not exposed to view and are insulated by means of knobs and

tubes; and conduit and armored cable work, in which the wires are run in metal pipes called conduits or are themselves protected by an integral metal coating or armor. The above classification does not include all forms of electrical work, as there are some specialized occupations which do not fall under the above heads, such as power-house work, for instance.

STORE OCCUPATIONS—EXECUTIVE POSITIONS.

Executives without exception are men and women who have risen from the ranks of store workers. These people have had experience in the line of store work which they are directing, and frequently have had experience in other departments of store work. Buyers, heads of departments, and managers are drawn mainly from the sales force of the department or the store in which they are employed or from the sales force of some other store engaged in the same line of business.

The manager is the merchandising executive. He directs the buying and selling of merchandise through buyers and heads of departments. The advertising manager and display men are also responsible to him for their work. He determines the kind of merchandise the store shall carry, the division of merchandise among departments, the amount of stock to be carried, and the advertising policy to be used for the store. The manager knows markets and merchandise; he understands business conditions; and he knows how to interpret the sales, losses, and demands of the business he directs. To be a successful executive, the manager must be a student of merchandising and business conditions. He must have sufficient knowledge of accounting to understand the statements of the firm. In addition to the larger business qualifications, he must have ability to deal with the buyers and heads of departments.

The superintendent has charge of the care of the building. He employs new workers and places them in the departments and dismisses employees. He has charge of the administration of the store system of sales slips, charges, credits, refunds, and also of the delivery department. He decides questions about the store system that may arise in the daily routine. He has general supervision of the delivery department, and decides upon changes that may be made in the delivery system. Many details of management connected with the daily routine of the departments, the management of crowds on sales days and during the holiday season, and the enforcement of store rules and discipline of workers are also included in his duties.

The superintendent must know how to deal with people. He must be able to judge of their capacity and suitability for the work when employing them, determine to some extent the type of work the applicant may be expected to do, enforce the store rules, and administer discipline with fairness and firmness. The superintendent who is successful combines these factors of training, experience, and education with that quality called personality, so highly valued but difficult to define, which enables him to administer business shrewdly, deal with employees fairly, and gives the customer a maximum of comfort in shopping and satisfaction in purchases made.

Men holding these administrative positions who have had less than high-school training say that they have made up as far as possible for the education they lacked by reading, study of practical affairs, and attention to business. Without exception, men in these positions interviewed for this study said that a good fundamental education of high-school grade or more, if of a practical sort, is necessary for the success of younger men entering business of the present day.

MINNEAPOLIS.

The mortar mixer.—There is usually one mortar mixer to every five or six bricklayers. This means between 75 and 100 in the busy season. The typical mortar mixer is between 20 and 50 years old and gets $3 for a nine-hour day.

He arrives before the other workmen and prepares the mortar, remaining after the bricklayers to cover his vat. He screens the sand, shovels the right amount of sand, cement, or lime into the vat, adds the water, mixes the material, and adds coloring material if necessary.

His work requires health and strength, as it is heavy and he is exposed to all kinds of weather. Average intelligence, but no superior knowledge or ability, is required. He must understand the action of water upon lime and cement and the proper mixtures of materials for different grades of work. His tools are the shovel and the hoe.

All the knowledge and skill required can be learned in a few weeks on the job, and it would be almost impossible to learn it otherwise. Usually, when a new mortar mixer is wanted a laborer is put on the job.

While this work offers no opportunity for promotion, a mixer who always supplies the bricklayers with mortar properly mixed will have regular employment and be advanced in pay.

The mortar mixer is being rapidly displaced by the more efficient mortar-mixing machine, which is operated by a gas engine and automatically dumps the motar into a wheelbarrow.

Printing trades.—The compositors and stonemen number about 400, including one-man shops. Those two jobs are so closely related that in most shops some duties of stonemen are expected of every compositor. A compositor works nine hours a day, eight hours in union shops, at $15 to $25 a week. The union scale is $21 for day and $24 for night work. He is usually 21 to 50 years old, having become a journeyman after four years of apprenticeship, or, as often happens in getting a new job, when able to "make the scale." A compositor is the fundamental productive worker in the room. The better workman he is, the more profitable the job.

He sets up the job from the copy, corrects proof returned from proof reader, and, after approval by the author, turns it over to the stoneman. If the shop is small, he performs the duty of stoneman. In jobs set partially by machine he sets the rest of the lines, throws space between lines, puts in cuts, and makes up pages. Some time is taken in distributing type and material, although the increased use of the monotype has lessened this item. In some plants he reads proof, orders stock, and performs other duties. In general, the smaller the job the greater the responsibility.

Promotion is toward make-up work as a stone hand, machine operator, or expert proof reader. The real tradesman regards the first as the only true promotion. The higher wages paid machine operators and a mechanical or literary bent causes some compositors, however, to regard the other jobs as worth seeking.

Many compositors go into business for themselves. This is made easy by manufacturers of printing machinery and supplies, who extend credit beyond the point warranted by prospects for business success. Employers complain that this overcrowds the market, stimulates undesirable competition, and demoralizes trade. Many such establishments go out of business every year, because of lack of capital and because of inexperience in business principles.

A compositor should have good eyesight, deft fingers, and steady nerves. He must be patient, painstaking, and accurate, and should be systematic, orderly,

and neat in order to keep his cases in good condition and not lose track of jobs, copy, or proof. Color sense is needed to set jobs in the best taste.

He can not have too broad an education, for he must deal with a wide range of subject matter. Many jobs require a sympathetic and intelligent attitude on the part of the compositor to express adequately the author's ideas. A compositor competent to show this attitude is always in demand.

Thorough knowledge of English, spelling, punctuation, capitalization, division of words, grammar, and paragraphing is essential. Weakness in any point leads to inaccuracy. A good compositor can correct manifest errors in copy. Knowledge of arithmetic through mensuration and compound numbers is necessary in order to estimate in both point and inch systems and monotype unit system.

The best compositors know enough of printing design to sketch roughly the layout of a page, and understand enough about weights and kinds of paper to select the kind suitable for the job. In small shops the compositor needs to know the principles of imposition to do the work at the stone, and this in a large shop enables him to take the place of the stoneman, thus improving the chances for promotion.

The skill required consists in picking up and manipulating type, "dumping" the stick, making up and justifying pages, inking galleys for proof, and handling single lines of type. This comes only from long experience. Proficiency in common-school branches, general information and acquaintance with literary standards, technical application of the principles of design, color harmony, and lettering, and knowledge of paper can not be attained while working on the job.

The common deficiencies are lack of general education, weakness in English, and ignorance of design and color harmony. The younger men are deficient in the fundamentals of other branches of the trade, such as binding, presswork, and stonework.

During the last few years the advertising man has taken from the compositor a large part of the responsibility for the artistic appearance of the job by making rigid specifications as to every detail, from which he may not deviate. There will always be jobs, however, on which he must exercise taste and artistic skill. This makes training in this line necessary. Evening courses in applied design as well as apprentices' courses in the fundamentals—straight and job composition, stonework, and proof reading—should be offered.

The linotype operators, numbering about 72, receive copy from the foreman, just as do hand compositors. The linotype man sets body-type matter and small display lines, places the cast slugs (lines of type) on the galley, and makes corrections in the galley by resetting lines containing errors. In many shops he must keep the machine adjusted properly and make some repairs. Large shops and newspaper offices employ linotype machinists for this work. Operators are from 30 to 50 years old and are paid from $24 to $30 a week for the usual eight-hour day. The union scale is $24 and $27.

Many operators were formerly hand compositors. Some have had little experience as compositors. There is no line of promotion, the only advancement being increased wages with improvement in accuracy and speed.

The machine operator should have nimble fingers to operate the keyboard and be a quick thinker to acquire speed and accuracy in performing the many details of his work. He must be able to concentrate his mind on the copy and still carry the measurement of the line he is setting in order to obtain correct spacing.

These qualifications call for mental ability different from that of the hand compositor. With less variety of detail to interest the worker, greater capacity for sustained mental effort and nervous strain is required. However,

the work is performed while seated, permitting a lame or otherwise physically deformed workman to be a satisfactory machine operator. He needs even better eyesight than the hand compositor to endure steady work on bad copy.

He should have the same educational qualifications and technical knowledge as the hand compositor and also understand the machine thoroughly and know the proper temperature of metal necessary to get good type face of slugs. He does not need all the technical skill required by the hand compositor. His efficiency depends rather upon ability to read manuscript rapidly and operate keys simultaneously. He should be able to make adjustments or minor repairs on his machine.

All these qualifications can be developed on the job, but some men go to machine schools. The best operators are hand compositors who have gone over to the machine. It takes about a year to develop an operator in this manner. Common deficiencies of machine operators are the same as those of hand compositors.

Little training is to be had for this position outside the routine. The great need is for the broad, fundamental training of the hand compositor. It is not enough to learn the keyboard. Improvement in printing standards will come only as previous training and experience in hand composition is required of all who expect to be machine operators. Some instruction in construction of the machine would be valuable.

Monotype keyboard operators, of whom there are about eight, differ from the linotype operators in that they perform only one part of the process—that is, operate the keyboard. Casting the type is not done at the same time or even in the same room, as in linotype work. The monotype operator, by a keyboard, perforates rolls of paper, which control through pneumatic process the operation of the caster machine.

He must care for this keyboard and make minor repairs. He puts in new rolls and takes out perforated rolls, changes the machine for different sizes of type and width of composition, which require changes of drum scales and keyboard, sets the em rack to different measures, and casts up copy if the form is tabular. He must figure various columns of picas and allow for rules or other material to be inserted by hand. His responsibility ends when he turns over the perforated rolls to the caster man.

Monotype operators range from 30 to 50 years old, and are paid $20 to $27 a week, working eight hours a day. Like linotype operators, they come from the composing room or a monotype school. The statements as to the linotype operator regarding preference for the former training and the difference between machine and hand composition in their demands on the nervous system apply equally to the monotype operator.

APPENDIX B.

PUBLIC HIGH SCHOOLS REPORTING VOCATION BUREAUS OR SIMILAR DEPARTMENTS.

[This list was compiled as the result of a card inquiry mailed in February, March, and April, 1918. The following form was used:

The Bureau of Education has been requested to prepare for the use of the Government in the present war emergency a list of schools having DEPARTMENTS OR BUREAUS DESIGNED TO ASSIST YOUNG PERSONS IN SECURING EMPLOYMENT. Will you therefore answer the following questions: Does your school maintain a department or bureau as described above? _____ *Does the department serve mainly as an employment agency?* (*Yes or no.*) _____ *Or does it give general vocational direction?* _____]

Alabama.

Winston County High School, Double Springs.
Graded High School, Marbury.
Blount County High School.

Arkansas.

Graded High School, Cotter.
High School, El Paso.
Eureka High School, Eureka Springs.
High School, Fort Smith.
Langston High School, Hot Springs.
Normal Training High School, Mountain Home.

Arizona.

Mohave County High School, Kingman.
Union High School, Mesa.
High School, Miami.
Union High School, Safford.
Union High School, Phoenix.
High School, Tucson.
High School, Winslow.
High School, Yuma.

California.

High School, Alameda.
Union High School, Anaheim.
Riverview Union High School, Antioch.
Citrus Union High School, Azusa.
Kern County High School, Bakersfield.
High School, Beaumont.
Union High School, Clovis.
Union High School, Dixon.
High School, Eureka.
Armijo Union High School, Fairfield.
High School, Fortuna.
High School, Fresno.
Fremont High School, Fruitvale Station.
Union High School, Fullerton.
Agricultural High School, Gardena.
Union High School, Glendale.
Union High School, Hanford.
Union High School, Hemet.
San Benito County High School, Hollister.
Imperial Valley Union High School, Imperial.
Union High School, Inglewood.
Antelope Valley High School, Lancaster.
High School, Long Beach.
Evening High School, Los Angeles.
Hollywood High School, Los Angeles.
Lincoln High School, Los Angeles.
Manual Art High School, Los Angeles.
Polytechnic High School, Los Angeles.
High School, Marysville.

High School, Modesto.
High School, Monrovia.
Union High School, Monterey.
High School, Mountain View.
High School, National City.
Technical High School, Oakland.
Chaffey Union High School, Ontario.
Union High School, Orange.
High School, Pasadena.
High School, Pomona.
Union High School, Red Bluff.
High School, Redlands.
Sequoia Union High School, Redwood City.
Polytechnic High School for Boys, Riverside.
Union High School, Roseville.
Evening High School, Sacramento.
High School, Sacramento.
High School, San Bernardino.
Girls' High School, San Francisco.
Mission High School, San Francisco.
Polytechnic High School, San Francisco.
Union High School, San Mateo.
High School, San Pedro.
High School, Santa Ana.
High School, Santa Monica.
Analy Union High School, Sebastopol.
High School, Stockton.
High School, Watsonville.
Union High School, Ventura.

Colorado.

Washington County High School, Akron.
High School, Alamosa.
High School, Colorado Springs.
Manual Training High School, Denver.
East Side High School, Denver.
West Side High School, Denver.
High School, Grand Junction.
High School, Fowler.
Montrose County High School, Montrose.
High School, Ordway.
High School District 20, Pueblo.
High School, Trinidad.

Connecticut.

High School, Bridgeport.
High School, Danbury.
High School, Meriden.
High School, New Britain.
High School, New Haven.
High School, Rockville.
High School, Shelton.
Norwalk High School, South Norwalk.
High School, Stamford.
High School, Torrington.

District of Columbia.

Business High School, Washington.
McKinley Manual Training School, Washington.

Georgia.

English Commercial High School, Atlanta.
Girls' High School, Atlanta.
Academy of Richmond County, Augusta.
Chatham Academy High School, Savannah.
First District Agriculture School, Statesboro.

Florida.

Junior High School, Largo.
High School, Pensacola.
Palm Beach High School, West Palm Beach.

Idaho.

Graded High School, American Falls.
High School, Boise.
Graded High School, Kuna.
Fort Lapwai High School, Lapwai.
High School, Lewiston.
High School, Mountain Home.
Idaho Technical Institute, Pocatello.
High School, Soda Springs.

Illinois.

East Side High School, Aurora.
High School, Barry.
St. Clair Township High School, Belleville.
Graded High School, Carlock.
High School, Champaign.
Austin High School, Austin Station, Chicago.
Crane Technical High School, Chicago.
Englewood High School, Chicago.

Marshall High School, Chicago.
Harrison Technical High School, Chicago.
Albert G. Lane Technical High School, Chicago.
Wendell Phillips High School, Chicago.
Carl Schurz High School, Chicago.
Senn High School, Chicago.
Tilden High School, Chicago.
J. Sterling Morton High School, Cicero.
High School, Coal City.
High School, Coffeen.
De Kalb Township High School, De Kalb.
Maine Township High School, Des Plaines.
High School, Dwight.
High School, East Moline.
High School, East St. Louis.
High School, Elmwood.
High School, El Paso.
High School, Elgin.
High School, Elizabeth.
High School, Galena.
High School, Granite City.
High School, Griggsville.
High School, Highland Park.
High School, Hoopeston.
High School, Ipava.
Joliet Township High School, Joliet.
High School, Kewanee.
La Salle-Peru Township High School, La Salle.
High School, Libertyville.
High School, Marshall.
High School, Moline.
High School, Morris.
Lovejoy High School, Mound City.
High School, Murphysboro.
High School, Nashville.
High School, Nokomis.
Oak Park and River Forest Township High School, Oak Park.
High School, Palestine.
High School, Paw Paw.
Central High School, Peoria.
Manual Training High School, Peoria.
Pontiac Township High School, Pontiac.
Princeton Township High School, Princeton.
High School, Quincy.
High School, Rochelle.
High School, Rockford.
High School, Rock Island.
High School, Savanna.
High School, Saybrook.
High School, Shabbona.
High School, Sterling.
High School, Stonington.
High School, Tonica.
McCray-Dewey High School, Troy.
High School, Urbana.
High School, Virden.

Indiana.

High School, Ambia.
High School, Angola.
High School, Bedford.
High School, Bloomington.
High School, Brazil.
High School, Bremen.
High School, Cayuga.
High School, Clay City.
High School, Columbia City.
High School, Columbus.
High School, Connersvile.
High School, Crawfordsville.
High School, Danville.
High School, Deedsville.
High School, Dunkirk.
High School, Evansville.
High School, Frankfort.
High School, Freetown.
High School, French Lick.
High School, Greensburg.
High School, Hammond.
High School, Hope.
High School, Huntington.
Rockcreek Township High School, Huntington.
Shortridge High School, Indianapolis.
High School, Jamestown.
High School, Jasper.
High School, La Fayette.
High School, La Fontaine.
High School, La Grange.
High School, La Porte.
High School, Linton.
High School, Logansport.
High School, Lowell.
High School, Lynnville.
High School, Marion.
High School, Michigantown.
High School, Mishawaka.
High School, Monroe City.
High School, Monterey.
High School, Muncie.

High School, Newberry.
Olive Township High School, New Carlisle.
High School, Noblesville.
High School, North Vernon.
High School, Oolitic.
Bangs Township High School, Osceola.
New Pekin High School, Pekin.
High School, Plainfield.
High School, Richmond.
High School, Rushville.
Washington Township High School, Salem.
High School, Shelbyville.
Adams Township High School, Sheridan.
High School, Sheridan.
High School, Tipton.
High School, Tunnelton.
High School, Valparaiso.
High School, Waveland.
High School, Waynetown.
Washington Township High School, Westfield.
High School, West Terre Haute.
High School, Williamsburg.
High School, Williamsport.
High School, Winamac.

Iowa.

High School, Adair.
High School, Adel.
High School, Albia.
High School, Algona.
High School, Armstrong.
High School, Batavia.
High School, Blairstown.
High School, Britt.
High School, Buffalo Center.
High School, Burlington.
High School, Charles City.
High School, Cherokee.
High School, Cincinnati.
High School, Clarinda.
High School, Coggon.
High School, Collins.
High School, Coon Rapids.
High School, Council Bluffs.
North Des Moines High School, Des Moines.
West Des Moines High School, Des Moines.
High School, Diagonal.
High School, Dow City.
High School, Elliott.
High School, Estherville.
High School, Farragut.
High School, Forest City.
High School, Garden Grove.
High School, Gilmore City.
High School, Grand River.
High School, Greenfield.
High School, Hartley.
High School, Hawarden.
High School, Holstein.
High School, Humboldt.
High School, Independence.
High School, Kellogg.
High School, Keystone.
High School, Lake City.
High School, Laurens.
High School, Lehigh.
High School, Le Mars.
High School, Lisbon.
High School, Lohrville.
Graded High School, Luana.
High School, Manchester.
High School, Manila.
High School, Marengo.
High School, Marshalltown.
High School, Mediapolis.
High School, Milford.
High School, Montour.
High School, New Albin.
High School, New Hampton.
High School, New London.
High School, Newton.
High School, Northwood.
High School, Oakland.
High School, Ogden.
High School, Oskaloosa.
High School, Pella.
Graded High School, Pisgar.
High School, Pocahontas.
High School, Pomeroy.
High School, Redfield.
High School, Reinbeck.
High School, Remsen.
High School, Rockwell City.
High School, Rowan.
High School, Russell.
High School, St. Ansgar.
High School, Seymour.
High School, Shannon City.
High School, Smithland.
High School, Spirit Lake.
McKinley High School, Stanwood.
High School, State Center.

High School, Storm Lake.
High School, Sutherland.
High School, Tipton.
Graded High School, Tracy.
High School, Union.
East Waterloo High School, Waterloo.
High School, Webb.
High School, Winfield.
Normal and High School, Woodrine.

Kansas.

High School, Belpre.
High School, Blue Rapids.
High School, Caney.
Clay County High School, Clay Center.
High School, Coffeyville.
High School, Coldwater.
High School, Dodge City.
High School, Everest.
High School, Hays.
High School, Herington.
High School, Hiawatha.
High School, Leavenworth.
High School, Lindsborg.
High School, Logan.
High School, Manhattan.
High School, Newton.
Reno County High School, Nickerson.
High School, Nortonville.
High School, Olathe.
High School, Oneida.
High School, Overbrook.
High School, Pratt.
High School, Salina.
Scott County High School, Scott.
High School, Topeka.
High School, Valley Falls.
High School, Washington.

Kentucky.

Russell High School, Lexington.
Girls' High School, Louisville.
High School, Mount Sterling.

Maine.

High School, Bangor.
High School, Castine.
Jordan High School, Lewiston.
High School, Lisbon.
Deering High School, Portland.
High School, South Portland.

Maryland.

Baltimore City College, Baltimore.

Massachusetts.

Punchard High School, Andover.
High School, Amesbury.
High School, Arlington.
Sanderson Academy, Ashfield.
High School, Attleboro.
High School, Belmont.
Howe High School, Billerica.
Mechanic Arts High School, Boston.
Brighton High School, Boston.
Dorchester High School, Boston.
East Boston High School, Boston.
English High School, Boston.
Girls' High School, Boston.
High School of Commerce, Boston.
High School of Practical Arts, Roxbury, Boston.
Roxbury High School, Boston.
South Boston High School, Boston.
West Roxbury High School, Boston.
High School, Brookline.
High and Latin School, Cambridge.
Rindge Technical School, Cambridge.
High School, Chelsea.
High School, Chicopee.
High School, Concord.
High School, Dedham.
High School, Everett.
Technical High School, Fall River.
High School, Fitchburg.
High School, Framingham.
High School, Gloucester.
Searles High School, Great Barrington.
High School, Greenfield.
High School, Haverhill.
High School, Lawrence.
High School, Lenox.
High School, Leominster.
High School, Lexington.
High School, Lowell.
Classical High School, Lynn.
English High School, Lynn.
High School, Mansfield.
High School, Manthuen.
High School, Millbury.
High School, Milton.
High School, Natick.
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BULLETIN, 1918, No. 25

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REPORT OF A SURVEY MADE UNDER THE DIRECTION OF THE COMMISSIONER OF EDUCATION

WASHINGTON
GOVERNMENT PRINTING OFFICE
1918

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LETTER OF TRANSMITTAL.

DEPARTMENT OF THE INTERIOR,
BUREAU OF EDUCATION,
Washington, October 18, 1918.

SIR: I am transmitting herewith for publication as a bulletin of the Bureau of Education a report of the survey of industrial education in the city of Wilmington, Del. The study was made and the report prepared under the direction of this bureau by Fred C. Whitcomb, professor of industrial education in Miami University, Oxford, Ohio. It is a part of a comprehensive constructive educational survey of the State of Delaware which has been undertaken by this bureau at the request of education officers of the State and of the city of Wilmington.

Reports of other parts of the survey will be recommended for publication as separate bulletins later.

Respectfully submitted.

P. P. CLAXTON,
Commissioner.

The SECRETARY OF THE INTERIOR.

PREFACE.

This report represents one section of the comprehensive survey of the State of Delaware which is being made by the United States Bureau of Education of the Department of the Interior in cooperation with the Delaware Educational Cooperation Association.

The field work of this section of the survey was done during November and December, 1915, and January, 1916. A conference of representatives of the various interests especially concerned with the survey was called at Wilmington. The following persons were present:

Dr. William T. Bawden, specialist in industrial education, representing the Bureau of Education.

Hon. C. A. Wagner, State commissioner of education, Dover.

Mr. C. J. Scott, superintendent of public schools, Wilmington.

Mr. John H. Hickey, organizer, American Federation of Labor, Wilmington.

Mr. W. C. Davis, secretary, Central Labor Union, Wilmington.

Dr. T. O. Cooper, board of education, Wilmington.

Mr. J. F. Robinson, instructor in charge of metalworking, public high school, Wilmington.

Mr. S. A. Davis, educational secretary, Young Men's Christian Association, Wilmington.

Miss Jennette Eckman, secretary, General Service Board of Delaware, Wilmington.

Mr. Fred C. Whitcomb, professor of industrial education, Miami University, Oxford, Ohio.

At this conference an outline of the proposed plan of this section of the survey (see Appendix A) was submitted and discussed. The plan met with general approval and promises of hearty cooperation.

This general conference was followed by others with the executive board of the Central Labor Union and groups of men representing the different locals of the Central Labor Union. In addition conferences were held with individuals representing the various interests in the city, such as the chamber of commerce, manufacturers, and employers of labor, the schools (public and private), business, Young Men's Christian Association, business colleges, etc.

During the progress of the survey each labor union local was visited and the work of the survey explained. Cooperation of all interests was freely given. Especial thanks are due Mr. C. J. Scott,

superintendent of the public schools of Wilmington, for his untiring efforts to make the work of the survey a success. The records in his office and the help of his corps of teachers were at all times available. Thanks are due also to Mr. John H. Hickey, organizer, American Federation of Labor, for his assistance in arranging for meetings with the different locals and groups of men representing the different trades.

Mr. L. A. Davis, educational secretary of the Young Men's Christian Association, was especially helpful in arranging for meetings of groups of men in the association rooms, and in furnishing information on the educational facilities available for men and boys who have left the schools and are at work.

INDUSTRIAL EDUCATION IN WILMINGTON, DELAWARE.

CHAPTER I.

INTRODUCTION.

DELAWARE.

With the exception of Rhode Island, Delaware is the smallest State in the Union. With an area of 2,370 square miles, it is twice as large as Rhode Island. Outside of the city of Wilmington, the interests of the State are almost exclusively rural and agricultural.

WILMINGTON.

Wilmington, the metropolis of Delaware, is located in New Castle County, on the Delaware River, at the junction of the Christiana and Brandywine Rivers. Its area is 10.18 square miles, and it has 5 miles of frontage on the Delaware River.

The population of Wilmington was 87,411 in 1910, or 43.2 per cent of the total population of the State, and it was the only city in the State having a population of more than 5,000. From 1900 to 1910 the population of the city increased 14.3 per cent. Since 1910 the increase in population has been much more rapid.

Wilmington is situated midway between New York and Washington, 27 miles from Philadelphia, and 69 miles from Baltimore. Excellent transportation facilities are provided by three railroads, three interurban trolley lines, and freight and passenger steamship lines. The city has easy access to markets for fuel and raw materials, with low freight rates.

The original charter of the Borough of Wilmington was granted by the State legislature in 1832.

COMPULSORY ATTENDANCE LEGISLATION.

According to a law passed in 1907, and amended in 1909, each child between the ages of 7 and 14 is required to attend a day school in which the common English branches are taught. Such attend-

ance must be continuous and for at least five months each year. This five-month's period must begin not later than one month after the opening of school. A child may be excused from attendance only on presentation of a certificate showing that he is "prevented from attendance upon school or application to study by mental, physical, or other urgent reasons."

A proviso in the law, however, gives any school district power "at its regular annual meeting to reduce the period of compulsory attendance to not less than three months." It is also provided that instruction for a like period in a private school or by a legally qualifield governess or private teacher in a family or by any other means approved by the county superintendent of schools shall exempt from attendance at a public school.

Provision is also made for the employment of attendance officers, and for other means for enforcing the law, the details of which need not be discussed here.

LEGISLATION CONCERNING EMPLOYMENT OF MINORS.

In 1913 the State legislature passed "an act to regulate the employment of children and to make uniform the laws relating thereto." The more important provisions of this law may be summarized as follows:

1. The employment of no child shall in any way interfere with the provisions of the compulsory school law or "prevent children of any age from receiving industrial education furnished by the United States, this State, or any city or town in the State and duly approved by the State board of education, or by a school board, or committee, or other duly constituted public authority."

2. No child under 16 years of age who is not provided with an employment certificate may be permitted to work except in agriculture, domestic service, the canning industry, places of amusement, and street trades.

3. Employment certificates are of two classes, general employment certificates and vacation employment certificates. A general employment certificate entitles the holder to work during the entire year, and a vacation employment certificate entitles the holder to work only at such times as the law does not require him to attend school.

4. In addition "street trades permits" are required of all boys under 14 and all girls under 16 who wish to sell newspapers, periodicals, etc., outside of school hours.

5. The law further provides that:

In any case where the labor of a child under the age as specified in this act is necessary to assist in the support of itself or its family * * * the State child-labor inspector shall present the case of such child to the judge of the

juvenile court of the city of Wilmington * * * and also to the agent of the Society for the Prevention of Cruelty to Children, and if said judge and said agent shall sign a permit for said purpose, the said child shall be allowed to work for not exceeding one year from the date of said permit, and said permit may be renewed by said judge and said agent from year to year.

Few such permits have been issued.

6. Certain special restrictions are prescribed as to ages of children who are employed:

(*a*) No child under 12 years of age may work in a canning or packing establishment except those handling perishable fruits or vegetables.

(*b*) No child under 14 may work in a mill, factory, workshop, mercantile or mechanical establishment, office, restaurant, or hotel, barber shop, stable, or garage, or as messenger, etc.

(*c*) No child under 15 may be employed about moving machinery, where dangerous materials are used, or in any other occupation dangerous to life or limb, or injurious to the health or morals of such child.

(*d*) In general no child under 16 may be employed with any theatrical performance or show.

(*e*) No person under 21 may be employed in connection with any saloon or barroom where intoxicating liquors are sold.

(*f*) The hours of employment are restricted.

7. No employment certificate may be issued unless the following papers are presented:

(*a*) A school record showing that the child has attended school regularly for not less than 130 days either during the 12 months previous to arriving at the age of 12 years or during the 12 months previous to applying for such school record, and is able to read intelligently and to write legibly simple sentences in the English language.

(*b*) A certificate from the school physician stating that the child has reached the normal development of a child of its age and is physically able to perform the work for which a child between 12 and 16 may be legally employed.

(*c*) Evidences of age, etc.

8. In the establishments for the canning and packing of fruits and vegetables there are no restrictions either as to age or as to the number of hours of employment. Also in the street trades there is no minimum age for the issuing of permits outside of school hours.

These weaknesses in the law furnish opportunity for the employment of very young children and for long hours of employment in certain trades.

9. City and county superintendents of schools are designated as the officials to issue employment certificates and permits.

ENFORCEMENT OF THE CHILD-LABOR LAWS.

The labor commission of the State appoints every four years a State child-labor inspector and an assistant to carry out the provisions of the child-labor laws. The secretary to the city superintendent of schools issues the employment certificates and permits in Wilmington. The State child-labor inspector and his assistant devote the major portion of their time to carrying out the provisions of the State child-labor laws. They materially assist in enforcing the provisions of the compulsory attendance laws.

CHAPTER II.

A STUDY OF CERTAIN GROUPS OF PUBLIC SCHOOL PUPILS.

In a number of recent survey reports attention is called to the significance for vocational education of a study of pupils in the public schools who are 13 or 14 years of age. As shown in Table 1 the public schools in Wilmington retain the children very well until the age of 13 is reached. The number of pupils 13 years of age is 18.7 per cent less than the number 12 years of age, while the number 14 years of age is 26.5 per cent less than the number 13 years of age. In the private and parochial schools the pupils are held up to the age of 11 years about as well as in the public schools, but after that age the dropping out is more rapid than in the public schools.

TABLE 1.—*Age distribution of pupils enrolled in public, private, and parochial schools in Wilmington, Del., 1915–16.*

Years of age.	Public schools.			Private and parochial schools.			Pupils of each age for each 100 pupils 7 years of age.	
	Boys.	Girls.	Total.	Boys.	Girls.	Total.	Public schools.	Private and parochial schools.
5	34	37	71	23	14	37	5	7
6	524	546	1,070	171	163	334	82	63
7	643	659	1,302	262	270	532	100	100
8	603	630	1,233	265	256	521	95	98
9	597	573	1,170	225	238	463	90	87
10	553	586	1,139	219	226	445	87	84
11	561	603	1,164	197	275	472	89	89
12	539	623	1,162	213	201	414	89	78
13	471	474	945	121	157	278	73	52
14	337	357	694	101	103	204	53	38
15	221	287	508	50	60	110	39	21
16	168	176	344	22	21	43	26	8
17	80	114	194	17	15	32	15	6
18	33	44	77	6	7	13	6	2
Over 18	12	13	25	1	2	3	2	0.6
Total	5,376	5,722	11,098	1,893	2,008	3,901	.....	.....

SOME FACTS CONCERNING PUPILS 13 AND 14 YEARS OF AGE.

Table 2 presents a summary of the number of pupils enrolled in public, private, and parochial schools who were 13 and 14 years of

age; also the places of birth and intentions as to further schooling reported by those enrolled in public schools; as to the last-named items reports from parochial and private school children were not available.

TABLE 2.—*Summary of reports of pupils 13 and 14 years of age, Wilmington, 1915–16.*

	Boys.	Girls.	Total.
Number reported enrolled in public schools	808	832	1,640
Number reported enrolled, parochial schools	163	205	368
Number reported enrolled, private schools	59	55	114
Total	1,030	1,092	2,122
PUBLIC SCHOOLS ONLY.			
Number of questionnaires sent to pupils	808	832	1,640
Number of questionnaires returned	704	649	1,353
Places of birth reported by pupils:			
Wilmington	457	395	852
Delaware, but outside of Wilmington	43	52	95
United States, but outside of Delaware	161	157	318
Foreign countries	39	27	66
Not reporting	4	18	22
School intentions:			
Not to complete eighth grade	148	70	218
To complete eighth grade	541	445	986
To go to high school	403	440	843
To go to college	148	126	274
To go to business college	33	60	93
Not reporting	16	19	35

There were 1,030 boys and 1,092 girls, or a total of 2,122 pupils, of these ages enrolled in the schools of Wilmington at the time this information was gathered. Of these, 1,640 were in the public schools, and blanks were filled by 1,353. Of these 1,353 children, almost two-thirds were born in Wilmington, and almost 100 more in the State outside of the city. Only 66 were born in foreign countries.

As shown in Table 2, the school intentions of the boys and girls 13 and 14 years of age in the Wilmington public schools are very encouraging. But the available facts relating to the present enrollment in the schools go to show that in all probability not half of these intentions will be realized. As more than one-half of these boys and girls are below their normal grades in the schools, and as they have either just passed the compulsory school age or are about to reach it, it is reasonable to expect a much larger number to drop out of school than have so indicated in their record of school intentions. Also the school enrollments by ages as shown in Wilmington and elsewhere indicate the same result.

As shown in Table 3, fewer than one-fourth of the fathers of these pupils were born outside of the United States, 23.8 per cent. Almost an equal proportion, 21.7 per cent, were born in Wilmington.

TABLE 3.—*Birthplaces of fathers of pupils 13 and 14 years of age in the public schools of Wilmington.*

Places of birth.	Number.	Per cent.
Wilmington	294	21.7
Elsewhere in Delaware	160	11.8
Elsewhere in United States	458	33.9
Foreign countries	322	23.8
Not reported	119	8.8
Total	1,353	100.0

Table 4 shows that the 2,122 pupils who are 13 and 14 years old are distributed through all of the eight grades and three years of the high school. With these children overageness is prominent. The proportion of children of normal age for the grade in which they are enrolled ranges from 42.9 per cent for 13-year-old boys to 48.2 per cent for 13-year-old girls. Records in the superintendent's office of the ages of pupils who withdrew from school during the period September to December, 1915, show that pupils 14 years of age formed the largest group.

TABLE 4.—*Grade distribution of pupils 13 and 14 years of age in the public schools of Wilmington.*

Grades.	Number of pupils of each age in each grade.					
	13 years of age.			14 years of age.		
	Boys.	Girls.	Total.	Boys.	Girls.	Total.
1	1	3	4	.....	1	1
2	7	4	11	2	3	5
3	21	8	29	11	3	14
4	53	42	95	11	10	21
5	98	97	195	36	26	62
6	126	153	279	65	84	149
7	**161**	**180**	**341**	98	108	206
8	**93**	**124**	**217**	**111**	**126**	**237**
I	29	19	48	**80**	**85**	**165**
II	3	1	4	24	12	36
III	.....	.....	.....	.....	3	3
Total	592	631	1,223	438	461	899
Per cent of total who are of normal age for the grade in which they are enrolled [1]	42.9	48.2	45.6	43.6	45.8	44.7

[1] Note black-face figures.

Table 5 shows the theoretical distribution of boys 13 years of age in the Wilmington public schools for each 10,000 boys of this age, for comparison with Dr. Ayres's figures resulting from a study of 22,027 boys. It will be observed that in both studies more than one-half of the boys are found in the sixth grade and below, although the Wilmington schools make a better showing in this respect than those reported by Ayres.

TABLE 5.—*Number of boys 13 years of age there would be in each grade in the Wilmington public schools for each 10,000 boys of this age, compared with distribution of 22,027 boys computed by Ayres.*

Grades.	Number of boys in each grade.		Number of boys in and below each grade.	
	Distribution of boys in Wilmington public schools.	Distribution of 22,027 boys (Ayres).	Distribution of boys in Wilmington public schools.	Distribution of 22,027 boys (Ayres).
1	21	25	21	117
2	85	76	106	193
3	382	316	488	509
4	934	944	1,422	1,453
5	1,613	1,814	3,035	3,267
6	2,017	2,498	5,052	5,760
7	2,781	2,507	7,833	8,267
8	1,742	1,441	9,575	9,708
I	361	243	9,936	9,951
II	64	28	10,000	9,979
III	.....	15	.....	9,994
IV	.....	6	.....	10,000
Total	10,000	10,000	.....	.....

Table 6 presents an analysis of the principal occupations reported in the 1910 census for Wilmington, together with the occupations chosen by pupils 13 and 14 years of age, and the occupations followed by relatives of these pupils. A summary of these figures for the principal census classifications, reduced to per cent basis, is given in Table 7.

TABLE 6.—*Distribution of occupations, Wilmington.*

Occupations.	Persons pursuing occupations stated (1910 census).		Chosen by pupils 13 and 14 years of age.		Occupations of fathers.		Occupations of employed brothers and sisters.	
	Male.	Female.	Boys.	Girls.	Boys.	Girls.	Male.	Female.
Total in all occupations	30,225	9,905	466	258	643	537	402	263
Agriculture, forestry, etc	211	5	20	.....	6	12	15	.....
Farmers	106	3	17	.....	3	10	12	.....
Foresters, lumbermen, etc	7	.....	3	.....	1	.....	1	.....
Gardeners, florists, etc	88	2	.....	.....	2	2	2	.....
Extraction of minerals	182	.....	.....	.....	.....	1	.....	.....
Manufacturing and mechanical	17,488	2,975	192	99	403	372	206	108
Apprentices	371	46	.....	.....	.....	.....	8	.....
Bakers	130	6	1	.....	2	3	1	2
Blacksmiths and forgemen	330	.....	3	.....	7	6	3	.....
Boilermakers	213	.....	.....	.....	.....	.....	1	.....
Brick and stone masons	223	.....	4	.....	7	5	1	.....
Builders and contractors	145	1	5	.....	10	9	1	.....
Butchers and dressers	43	.....	4	.....	4	2	2	.....
Cabinetmakers	200	.....	1	.....	10	8	1	.....
Carpenters and coopers	1,324	.....	25	.....	39	52	6	.....
Dressmakers and seamstresses	.....	702	.....	70	.....	.....	.....	11
Dyers	45	1	.....	.....	2	1	.....	.....
Electricians, etc	256	.....	36	.....	7	10	11	.....
Engineers, mechanical	49	.....	16	.....	2	.....	.....	.....
Engineers, stationary	278	.....	.....	.....	17	13	.....	.....
Firemen	181	.....	.....	.....	6	1	.....	.....
Foremen and overseers	379	33	.....	.....	33	25	1	3
Furnacemen, etc	80	.....	.....	.....	2	.....	.....	.....

TABLE 6.—*Distribution of occupations, Wilmington*—Continued.

Occupations.	Persons pursuing occupations stated (1910 census).		Chosen by pupils 13 and 14 years of age.		Occupations of fathers.		Occupations of employed brothers and sisters.	
	Male.	Female.	Boys.	Girls.	Boys.	Girls.	Male.	Female
Manufacturing and mechanical—Continued.								
Jewelers and watchmakers	27	1				1	1	
Laborers	5,289	139	1		70	79	42	6
Machinists, millwrights	1,359		75		42	54	30	
Managers and superintendents	179	2			6	6		
Manufacturers and officials	295	8			8			
Mechanics, not specified	41		1		17	7	2	
Milliners, etc	4	165		23				3
Molders, founders, casters	379				18	22	6	
Painters, glaziers, etc	620	1	3		15	17	5	
Paperhangers	92	1				6	1	
Patternmakers and model makers	88	1	1		3	3	1	
Plasterers	65					1	3	
Plumbers, etc	509		9		15	7	13	
Pressmen (printing)	11					4		
Rollers, roll hands (metal)	30					2	1	
Roofers and slaters	75				1			
Sawyers	28				1			
Semiskilled operatives	3,370	1,686	3	6	41	16	52	83
Shoemakers and cobblers	104	2			4	6	2	
Tailors and tailoresses	127	53	2		7	5	1	
Tinsmiths and coppersmiths	182		1		6	1	3	
Upholsterers	102	6	1		1			
Transportation	3,681	81	45	1	78	52	23	5
Water transportation	93				9	1	1	
Road and street transportation	683	1	12		17	9	12	
Railroad transportation	2,239	5	23		40	39		
Express, post, telegraph, etc	256	70	10	1	7	2	10	5
Other transportation	420	5			5	1		
Trade	3,639	1,013	67	6	106	76	89	70
Bankers, brokers, etc	80	1				1		
Clerks in stores	324	119	45		17	23	60	51
Commercial travelers	91	5	2					
Deliverymen	372	1	1		23		4	1
Insurance agents and officials	192	1			8			
Newsboys	31						5	
Real estate agents, etc	79	3			2		1	
Retail dealers	1,368	224	17		50	52	2	
Salesmen and saleswomen	631	636		6	6	10	17	18
Undertakers	40	3	2					
Public service	538	3	7		11	3		
Guards, watchmen, etc	132				3			
Laborers	121				1			
Marshals, sheriffs, etc	19				1			
Officials (city and county)	62	2			4			
Officials (State and United States)	25	1				2		
Soldiers, sailors, and marines	28		7			1		
Professional service	1,041	802	124	127	13	11	8	12
Actors and actresses	16	8		1				1
Architects	23	1	5			1		
Artists, etc	34	14	4					
Authors, editors, and reporters	29	5		2	2	1		
Chemists, assayers, etc	37	1	9	1		1		
Civil and mining engineers	83		31					
Clergymen	120	1			6	3		
Dentists	42	2						2
Designers, draftsmen, etc	217	5	30		1	2	5	
Lawyers, judges, etc	91		12					
Musicians, etc	60	103	12	37	1	1	2	2
Photographers	21	3			1	1		1
Physicians and surgeons	108	8	19	1	1	1		
Teachers	49	481	2	83				1
Trained nurses	2	100						
Other professional pursuits	10	42	2	1				5
Attendants and helpers	32	17					1	

TABLE 6.—*Distribution of occupations, Wilmington*—Continued.

Occupations.	Persons pursuing occupations stated (1910 census).		Chosen by pupils 13 and 14 years of age.		Occupations of fathers.		Occupations of employed brothers and sisters.	
	Male.	Female.	Boys.	Girls.	Boys.	Girls.	Male.	Female.
Domestic and personal service	1,355	4,033	11	24	24	9	12	40
Barbers, hairdressers, etc	245	42	6	4	6	7	4	1
Bartenders and saloonkeepers	218	10	.....	.....	5	.....	.....	.....
Elevator tenders	24	.....	1	.....	1	.....	.....	.....
Hotel keepers and managers	59	7	2	.....	.....	.....	.....	.....
Housekeepers and stewards	25	267	.....	5	.....	.....	.....	.....
Janitors and sextons	146	44	.....	.....	6	.....	1	.....
Laundry operatives	27	151	.....	.....	1	.....	.....	12
Midwives and nurses (untrained)	6	197	.....	4	1	.....	.....	.....
Restaurant and café keepers	51	11	.....	.....	1	.....	.....	.....
Servants	224	2,141	.....	8	2	1	3	23
Waiters and butlers	140	97	2	3	2	1	4	4
Clerical pursuits	2,090	993	.....	1	2	1	49	28
Agents, canvassers, etc	147	16	.....	.....	1	1	2	.....
Bookkeepers, cashiers, etc	398	366	.....	1	.....	.....	.....	3
Clerks (except in stores)	1,195	162	.....	.....	1	.....	1	2
Messengers, office boys, etc	232	3	.....	.....	.....	.....	33	.....
Stenographers and typewriters	118	446	.....	.....	.....	.....	13	23

TABLE 7.—*Per cent distribution of occupations, Wilmington.*

Occupations.	1910 census, Wilmington.		Chosen by pupils 13 and 14 years of age.		Occupations of fathers.		Occupations of employed brothers and sisters.	
	Male.	Female.	Boys.	Girls.	Boys.	Girls.	Male.	Female.
Total, all occupations	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Agriculture, forestry, etc	0.7	0.1	4.3	.....	0.9	2.2	3.7	.....
Extraction of minerals	.6	.....	.....	.....	.....	.2	.....	.....
Manufacturing and mechanical	57.9	30.0	41.2	38.4	62.7	69.3	51.2	41.1
Transportation	12.2	.8	9.6	.4	12.1	9.7	5.7	1.9
Trade	12.0	10.2	14.4	2.3	16.5	14.1	22.1	26.6
Public service	1.8	(1)	1.5	.....	1.7	.6	.....	.....
Professional service	3.4	8.1	26.6	49.2	2.0	2.0	2.0	4.6
Domestic and personal service	4.5	40.7	2.4	9.3	3.7	1.7	3.0	15.2
Clerical pursuits	6.9	10.0	.....	.4	.3	.2	12.2	10.6

[1] Less than one-tenth of 1 per cent.

The occupations chosen by the largest numbers of boys are:

Machinist, millwright	75
Clerk in store	45
Electrician	36
Civil and mining engineer	31
Designer, draftsman	30

Aside from the general classes of laborers and semiskilled operatives, the largest group reported in the 1910 census for males are:

Railroad transportation	2,239
Retail dealers	1,368
Machinists, millwrights	1,359

Carpenters, coopers	1,324
Clerks (except in stores)	1,195
Road and street transportation	683
Salesmen	631
Painters, glaziers	620
Plumbers	509

Among the fathers of the boys and girls the largest groups reported are:

Laborers	149
Retail dealers	102
Machinists, millwrights	96
Carpenters, coopers	91
Railroad transportation	79
Foremen, overseers	58
Semiskilled operatives	57

The occupations chosen by the largest numbers of girls are:

Teacher	83
Dressmaker, seamstress	70
Musician	37
Milliner	23

The occupations reporting the largest numbers of females in the 1910 census are:

Servants	2,141
Semiskilled operatives	1,686
Dressmakers, seamstresses	702
Saleswomen	636
Teachers	481
Stenographers, typewriters	446
Bookkeepers, cashiers	366

Referring to Table 7, it will be noted that although the manufacturing and mechanical industries represent 58 per cent of the occupations of males as reported in the 1910 census, only 41 per cent of the occupations chosen by the boys fall in this class. On the other hand, 27 per cent of the boys have chosen occupations included under professional service, whereas this group represents but 3 per cent of the total number of occupations according to the census.

Among the girls the proportion choosing manufacturing and mechanical pursuits, 38 per cent, is greater than the proportion of employed females in this class as reported by the census, 30 per cent. The proportion of girls choosing professional occupations, 49 per cent, is more than six times that of employed females in this class, 8 per cent; while the proportion of girls choosing domestic and personal service, 9 per cent, is less than one-fourth that of females who are thus employed in Wilmington, 41 per cent.

It will be noted, further, that the occupations of the fathers and employed brothers and sisters are distributed more nearly in accord

with the census distributions, except that the occupations of the brothers are but one-half the census proportion in the transportation class, and the occupations of both brothers and sisters are nearly twice the census proportions in trade (commercial) pursuits.

In Table 8 the reasons assigned by pupils for the choices of occupation reported are classified. Nearly two-thirds of these boys and girls, 61.9 per cent, state that they chose the occupations because they *liked* them. As they had not worked at these occupations (except in a very few instances), and in the absence of any systematic plan of vocational guidance in the schools, it is doubtful if these boys and girls had an adequate basis for giving this answer.

TABLE 8.—*Reasons given for choice of occupation by pupils 13 and 14 years of age, Wilmington.*

Reasons reported.	Number of pupils reporting.		
	Boys.	Girls.	Total.
Because they like it	172	196	368
To earn a living	63	68	131
To assist parents	12	17	29
Because it is parents' wish	12	13	25
Had no reason for choice	7	12	19
Occupation furnishes good opportunities	7	3	10
Selected for social reasons	5	4	9
Because parents have similar work	3	.....	3
Total	281	313	594

Of the 2,122 pupils 13 or 14 years of age, only 160, or 7.5 per cent, report working for wages outside of school hours (Table 9). It is worthy of note also that of the boys nearly seven-eighths, 84.9 per cent, have found their opportunities in trade (commercial) pursuits, while the opportunities in manufacturing and mechanical pursuits are practically negligible.

TABLE 9.—*Occupations outside of school hours of pupils 13 and 14 years of age.*

Occupations.	Number of pupils reporting.	
	Boys.	Girls.
Manufacturing and mechanical pursuits	4	2
Dressmakers, seamstresses	.....	2
Laborers	1	.....
Shoemakers, cobblers	1	.....
Tinsmiths, coppersmiths	2	.....
Transportation	2	.....
Hostlers, stable hands	2	.....

TABLE 9.—*Occupations outside of school hours of pupils 13 and 14 years of age*—Continued.

Occupations.	Number of pupils reporting.	
	Boys.	Girls.
Trade	118	
Clerks in stores	20	
Delivery boys	23	
Helper in store	1	
Newsboys	69	
Retail dealers	5	
Public service	4	
Laborers	4	
Domestic and personal service	11	19
Barbers	6	
Nurses		4
Servants	2	15
Other pursuits	3	
Total	139	21

FACTS CONCERNING HIGH-SCHOOL BOYS AND GIRLS.

Investigation showed that in the Wilmington public schools there are one-fourth as many pupils in the first year of high school as in the first grade, and also that there are almost as many pupils in the first year of high school as in the eighth grade. It appears further that there is a big shrinkage after the first year of high school, there being only about one-half as many pupils in the second year as in the first year. The fourth year shows only one-fourth as many pupils as entered the high school.

It was found, also, that in the parochial and private schools only one-tenth as many pupils are in the first-year high school as in the first grade. These high schools, however, hold their pupils much better than do the public high schools. In the public schools 7 out of every 100 found in the first grade are in the fourth-year high school, while in the parochial and private schools similar figures show 6 in the fourth year of the high school.

Questionnaires were submitted to pupils of the public high schools only. At the time of making this survey 1,067 pupils, 491 boys and 570 girls, were enrolled in these schools. These ranged in ages from 12 years to a few over 18 years. About one-fourth of the enrollment was overage. The greatest percentage of overageness was found in the first year of the high school, where it is 31 per cent. This would indicate that a large share of the withdrawals during and at the end of the first year is due to the fact that these boys and girls realize that they are behind in their school work and so become discouraged.

Reports were secured from 1,005 pupils, 482 boys and 523 girls.

PLACES OF BIRTH.

Table 10 shows the birthplaces of these pupils, of whom 779 were born in the State of Delaware, and all but 100 of these in the city of Wilmington. Only 12 of the total number of high-school pupils, 1.1 per cent, were born outside of the United States, whereas Table 2 shows that 4.8 per cent of the pupils 13 and 14 years of age were foreign born.

TABLE 10.—*Birthplaces of high-school pupils, Wilmington.*

Places of birth.	Number of pupils reporting.		
	Boys.	Girls.	Total.
Wilmington	229	350	579
Elsewhere in Delaware	46	54	100
Elsewhere in United States	103	111	214
Foreign countries	4	8	12
Total	482	523	1,005

The public high school for whites offers four courses. These four courses were chosen by the 1,005 high-school pupils studied in the following numbers: Classical, 311; commercial, 286; Latin-scientific, 241; general, 167. The boys chose them in the order of Latin-scientific, general, commercial, classical; while the girls chose the classical first and the others in the order of commercial, general, Latin-scientific.

Table 11 presents an analysis of the reasons given by the pupils for the courses selected. One-third of the total number, 33.3 per cent, give preparation for college as the reason for their choices, while 209, or 20.7 per cent, chose their courses as preparation for commercial work.

TABLE 11.—*Number of pupils enrolled in high-school courses, with reasons assigned for choices, Wilmington.*

Reasons assigned for choices.	Number of pupils in specified courses.														
	Total in all courses.			Classical.			Commercial.			Latin-scientific.			General.		
	Boys.	Girls.	Total.	Boys.	Girls.	Total.	Boys.	Girls.	Total.	Boys.	Girls.	Total.	Boys.	Girls.	Total.
Preparation for college	185	160	345	57	146	203	4	2	6	115	10	125	9	2	11
Preparation for commercial work	58	151	209	....	8	8	54	141	195	3	1	4	1	1	2
Because they like it best	34	70	104	3	35	38	10	5	15	4	10	14	17	20	37
Seems to be of most use	59	34	93	1	....	1	15	13	28	19	10	29	24	11	35
Preparation for industrial work	63	3	66	3	....	3	2	3	5	26	....	26	32	....	32
Preparation for teaching	....	48	48	....	27	27	....	6	6	....	6	6	....	9	9
Parents' choice	11	29	40	1	18	19	3	8	11	4	1	5	3	2	5
Wanted mathematics or science	32	....	32	....	....	....	1	....	1	17	....	17	14	....	14
To complete education	15	8	23	....	2	2	6	2	8	....	1	1	9	3	12
Do not know	12	10	22	1	4	5	3	2	5	5	2	7	3	2	5
Preparation for professional work	7	8	15	2	2	4	....	4	4	5	1	6	....	1	1
Advice of teacher	3	1	4	....	1	1	....	....	....	1	....	1	2	....	2
Suited to pupils' abilities	3	1	4	....	....	....	1	1	2	....	....	....	2	....	2
Total	482	523	1,005	68	243	311	99	187	286	199	42	241	116	51	167

Two years of manual training are required of the boys in all four courses, while the same amount of work in domestic science is required of the girls. In the questions submitted to the pupils two had to do with this work. The first question asked whether, if manual training and domestic science were not required, they would choose these subjects. To this 811 pupils—379 boys and 432 girls—stated that they would do so, while only 194—103 boys and 91 girls—would not do so.

Table 12 states the reasons given by the pupils for and against choosing these subjects. Almost one-third of the pupils like the work, while one-half consider the subjects either necessary or useful in an education. Only one-tenth stated that they do not like the work. A larger number of girls than boys seem to like the work, while the practical value of the work seems more apparent to the boys than to the girls. The value of the practical arts in an education is felt by a larger number of girls than boys.

TABLE 12.—*Reasons assigned by high-school pupils for and against choosing manual training or home economics as subjects in their courses, Wilmington.*

Reasons assigned.	Number of pupils who would choose.			Number of pupils who would not choose.		
	Boys.	Girls.	Total.	Boys.	Girls.	Total.
They like the subjects	121	157	278	.....	.....	.....
Consider them useful or of benefit	155	116	271	.....	.....	.....
Necessary to one's education	79	144	223	.....	.....	.....
No reason assigned	24	15	39	37	21	58
Do not like the subject	.....	.....	.....	39	53	92
Do not see the need of the work	.....	.....	.....	27	17	44
Total	379	432	811	103	91	194

These answers should be very encouraging to the school authorities in strengthening the high-school work in the practical arts.

The second question asked of the high-school pupils related to their intentions as to further schooling. The replies are summarized in Table 13. As in the case of pupils 13 and 14 years of age, these declarations of intention greatly overrate the schooling probabilities. While more than nine-tenths of these high-school pupils state that they expect to complete the high-school course, the enrollment figures for 1915–16 show only about one-fourth, 28.3 per cent, as many pupils in the fourth year of the high school as in the first. Almost two-thirds of the high-school pupils plan to go on to other schools or colleges, although in all probability not more than one-half of this number will do so.

TABLE 13.—*Intentions with reference to further schooling reported by high-school pupils, Wilmington.*

Intentions.	Number of pupils reporting.		
	Boys.	Girls.	Total.
Regarding high-school work:			
To complete a high-school course	425	485	910
Not decided	28	23	51
Not to complete a high-school course	28	15	43
Not reporting	1	.....	1
Total	482	523	1,005
Regarding other schooling after leaving high school:			
To go to some other school	307	307	614
Not to attend other school	75	148	223
Not decided	76	53	129
Not reporting	24	15	39
Total	482	523	1,005

It would be of incalculable value to community, State, and Nation if, through the more earnest cooperation of parents, teachers, and pupils, these high hopes and ambitions could be more fully realized.

As shown in Table 14, of 305 employed brothers and sisters of high-school pupils only about one-tenth, 10.8 per cent, are under 17 years of age.

TABLE 14.—*Age distribution of employed brothers and sisters of high-school pupils who are under 21 years of age, Wilmington.*

Age period.	Number of employed brothers and sisters who are under 21 years of age.		
	Brothers.	Sisters.	Total.
13 years or under	8	2	10
14 to 16 years, inclusive	14	9	23
17 to 20 years, inclusive	162	110	272
Total number reported	184	121	305

OCCUPATIONS CHOSEN BY HIGH-SCHOOL PUPILS.

Of the 1,005 high-school pupils who reported, 805, or 80 per cent, replied to the question, "What do you plan to do to earn a living?" Table 15 presents a summary of the occupations chosen by these pupils, together with the reported occupations of fathers and employed brothers and sisters. The per cent distribution of occupations by principal classes is shown in Table 16.

TABLE 15.—*Distribution of occupations chosen by high-school pupils and engaged in by relatives, Wilmington.*

Occupations.	Chosen by high-school pupils.		Occupations of fathers.	Occupations of brothers and sisters.	
	Boys.	Girls.		Male.	Female.
Total in all occupations	389	416	818	154	120
Agriculture, forestry, etc.	24		40	2	
Farmers	18		31	1	
Foresters, lumbermen, etc	4				
Gardeners, florists, etc	1		1	1	
Stock raisers, dairy farmers, etc	1		8		
Manufacturing and mechanical	135	7	392	46	21
Apprentices				7	
Bakers			10		
Blacksmiths, etc			3		
Brick and stone masons			7		
Builders and contractors	2		33		
Carpenters	3		32		
Compositors, linotypers, etc	6				
Dressmakers, etc		4			4
Electricians, electrical engineers	46		7	5	
Engineers (mechanical)	24		4	1	
Engineers (stationary)	4				
Firemen			2		
Foremen, overseers			56		
Laborers			33	2	10
Machinists, millwrights, etc	5		53	12	
Managers, superintendents	26		16	4	
Manufacturers, officials			25		
Mechanics (not specified)	6		13	1	
Milliners		3			5
Painters, glaziers, etc			15		
Pattern makers	1				
Paper hangers, etc	1				
Plumbers, etc			24	7	
Semiskilled operatives	3		13	3	2
Other pursuits	2		48	4	
Transportation	4		66	17	2
Brakemen			3	1	
Conductors			16		
Draymen, chauffeurs, expressmen			11	9	
Foremen and overseers			4		
Laborers			3	4	
Locomotive engineers			4		
Mail carriers			4		
Motormen			4		
Ship captains	1				
Telegraph and telephone operators			9	2	2
Wireless expert	1				
Other pursuits	2		8	1	
Trade	21	9	181	12	39
Bankers, brokers, etc	3		7		
Clerks in stores	12	6	28	2	22
Deliverymen				1	
Insurance agents			11		
Real estate agents	2	1	10		
Retail dealers		2	94		
Salesmen and saleswomen	2		22	6	16
Other pursuits	2		9	3	1
Public service	8		38	4	
Guards, watchmen, etc			1		
Laborers			17		
Military expert	1				
Officials, inspectors, etc			12	3	
Policemen			3		
Soldiers, sailors, etc	5			1	
Other pursuits	2		5		

TABLE 15.—*Distribution of occupations chosen by high-school pupils and engaged in by relatives, Wilmington*—Continued.

Occupations.	Chosen by high-school pupils.		Occupations of fathers.	Occupations of brothers and sisters.	
	Boys.	Girls.		Male.	Female.
Professional service	148	227	47	7	7
Architects	4				
Artists	3	6			
Civil engineers	30				
Chemists	31				
Clergymen	3		11		
Dentists	2				
Draftsmen, designers, etc	30	2			
Lawyers	13	2	5		
Musicians, music teachers, etc	2	41	3	2	
Physicians	15	7	11		
Teachers	2	140	2		7
Trained nurses		21			
Other pursuits	4	8	15	5	
Domestic and personal service			19	2	6
Barbers			3		
Janitors			3		
Launderers and laundresses					3
Restaurant keepers			5		
Saloon keepers			5		
Servants				1	3
Other pursuits			3	1	
Clerical occupations	49	173	35	64	45
Agents			4		
Bookkeepers	13	25	31	7	9
Clerks (except in stores)	13	16		47	2
Private secretaries	3	19			
Stenographers	12	113		11	34
Other pursuits	5				

TABLE 16.—*Per cent distribution of occupations chosen by high-school pupils and engaged in by relatives, Wilmington.*

Occupations.	Chosen by high-school pupils.		Occupations of fathers.	Occupations of brothers and sisters.	
	Boys.	Girls.		Male.	Female.
Total in all occupations	100.0	100.0	100.0	100.0	100.0
Agricultural, forestry, etc	6.2		4.9	1.3	
Manufacturing and mechanical	34.7	1.7	47.9	29.9	17.5
Transportation	1.0		8.1	11.0	1.7
Trade	5.4	2.2	22.1	7.8	32.5
Public service	2.1		4.6	2.6	
Professional service	38.0	54.5	5.7	4.5	5.8
Domestic and personal service			2.3	1.3	5.0
Clerical occupations	12.6	41.6	4.3	41.6	37.5

The occupations chosen by the largest numbers of boys are:

Electrician, electrical engineer	46
Civil engineer	39
Chemist	31
Draftsman, designer	30
Manager, superintendent	26
Mechanical engineer	24

The largest groups of occupations of fathers are:

Retail dealers	94
Foremen, overseers	56
Machinists, millwrights	53
Builders, contractors	33
Laborers	33
Carpenters	32
Farmers	31
Bookkeepers	31

The largest groups of employed brothers are:

Clerks (except in stores)	47
Machinists, millwrights	12
Stenographers	11

The largest groups of occupations chosen by the high-school girls are:

Teacher	140
Stenographer	113
Musician, music teacher	41
Bookkeeper	25
Trained nurse	21

The largest groups of employed sisters are:

Stenographers	34
Clerks in stores	22
Saleswomen	16
Laborers	10

Referring to Table 16, very large proportions of both boys and girls have chosen occupations in the professional service group as compared with the proportions of fathers and of employed brothers and sisters who have actually found employment in this group. The proportion of boys choosing manufacturing and mechanical pursuits is 17 times as great as the proportion of girls, and the proportion of girls choosing clerical pursuits is three times as great as the proportion of boys.

A comparison of the choices made by the high-school pupils with the occupations chosen by pupils 13 and 14 years of age, as well as the occupations of employed brothers and sisters, is shown in Table 17.

TABLE 17.—*Per cent distribution of occupations chosen by high-school pupils, pupils 13 and 14 years of age, and engaged in by employed brothers and sisters of high-school pupils, Wilmington.*

Occupations.	Number of boys.			Number of girls.		
	High-school pupils.	Pupils 13 and 14 years of age.	Employed brothers.	High-school pupils.	Pupils 13 and 14 years of age.	Employed sisters.
Total in all occupations	100.0	100.0	100.0	100.0	100.0	100.0
Agriculture, forestry, etc	6.2	4.3	1.3	.....	.....	.....
Manufacturing and mechanical	34.7	41.2	29.9	1.7	38.4	17.5
Transportation	1.0	9.6	11.0	.....	.4	1.7
Trade	5.4	14.4	7.8	2.2	2.3	32.5
Public service	2.1	1.5	2.6	.....	.....	.....
Professional service	38.0	26.6	4.5	54.5	49.2	5.8
Domestic and personal	.....	2.4	1.3	.....	9.3	5.0
Clerical occupations	12.6	.....	41.6	41.6	.4	37.5

Both classes of pupils chose the professions very largely. Since the high-school pupils are, to a considerable extent, a selected class of boys and girls, their choice is not so inconsistent with their probable future occupations as is that of the younger pupils. However, both sets of answers show the tendency of our schools to lead the pupils toward the professions. No doubt the influence of the two large business colleges had a great deal to do with the large number of pupils, especially girls, choosing the clerical occupations.

Table 18 is enlightening as to the reasons underlying the choices of occupation. More than one-fifth of the pupils, 23.3 per cent, assigned no reason at all, or "did not know" why they made the choice reported, while more than one-half, 52.7 per cent, had no better reason than that they like the chosen occupation or think of it as interesting. Here again, as in the case of the pupils 13 and 14 years of age, there is evident need for systematic vocational guidance.

TABLE 18.—*Reasons given for choice of occupation by high-school pupils, Wilmington.*

Reasons reported.	Number of pupils reporting.		
	Boys.	Girls.	Total.
Because they like it, or it seems interesting	225	305	530
No reason given	121	100	221
A paying occupation or offers a good living	45	14	59
Seem fitted for it	37	44	81
Choice of relatives, or advice of others	16	9	25
To earn a living	.....	24	24
Offers good opportunities	22	.....	22
Do not know	1	13	14
Fondness for children (teaching)	.....	9	9
Work is nice, clean, healthful, or refined	5	1	6
Useful occupation	1	2	3
An open field	3	.....	3
Training for West Point	1	.....	1
Will be "my own boss"	1	.....	1
Good education	1	.....	1
Honest occupation	1	.....	1
Preparation for civil service	1	.....	1
From force of circumstances	1	2	3
Total	482	523	1,005

The occupations of these pupils outside of school hours (Table 19), show little relation either to the occupations chosen or to the courses pursued in the high school.

TABLE 19.—*Occupations outside of school hours of high-school pupils, Wilmington.*

Occupations.	Number of pupils reporting.	
	Boys.	Girls.
Agriculture, forestry, etc.	1	
Trapping	1	
Manufacturing and mechanical	7	2
Butcher's helper	3	
Dressmaker		1
Helpers in printing office	4	
Tobacco stripper		1
Trade	122	8
Clerk in store	20	8
Delivery boy	4	
Elevator operator	1	
Fruit seller	1	
Helper in grocery store	18	
Milk boy	4	
Meat peddler	1	
Newsboy	68	
Salesman	5	
Public service	2	
Lighting street lamps	1	
State service	1	
Professional service	8	4
Librarian		1
Piano player	2	
Teacher of music	1	3
Usher in theater	5	
Domestic and personal service	5	
Helper in barber shop	1	
Bowling alleys	2	
Helper in restaurant	2	
Clerical occupations	21	1
Bookkeeper	1	
Clerk (except in store)	3	1
Collector	2	
Errand boy, office boy	16	
Not reported	27	18
Total	193	33

CHAPTER III.

A STUDY OF THE INDUSTRIES.

IMPORTANCE AND SCOPE.

The 1915 trade directory of the city of Wilmington is authority for the statement that there are $100,000,000 invested in manufactures in the city, and that the annual pay roll is $18,000,000. These estimates were probably somewhat large at the time this directory was issued, but there has been a tremendous growth in manufactures since that time.

The Census Bureau's preliminary statement of the general results of the census of manufactures for the city is given in Table 20. The comparative statements in this table for the year 1909 and 1914, respectively, do not show anything like the percentages of increase which would be shown at the present time.

TABLE 20.—*Comparative summary of manufactures in Wilmington: U. S. Census, 1909 and 1914.*

	1914	1909	Per cent of increase, 1909-1914.
Number of establishments	319	261	22.2
Persons engaged in manufactures	17,087	16,295	4.9
Proprietors, firm members	231	190	21.6
Salaried employees	1,789	1,442	24.1
Wage earners (average number)	15,067	14,663	2.8
Primary horsepower	38,974	29,282	33.1
Capital	$46,400,000	$38,504,000	20.5
Cost of services	$11,058,000	$9,688,000	14.1
"Salaries"	$2,364,000	$1,751,000	35.0
"Wages"	$8,694,000	$7,937,000	9.5
Cost of materials	$22,140,000	$21,976,000	.7
Value of products	$39,358,000	$38,069,000	3.4
Value added by manufacture (value of products less cost of materials)	$17,218,000	$16,093,000	7.0

This table does not include steam laundries, as these were listed separately in the census. These employed 346 persons during 1914, represented a capital investment of $236,664, and the amount received for work done was $226,332.

During the period 1909 to 1914 the amount of capital invested increased 20.5 per cent, the number of establishments increased 22.2

per cent, and the number of salaried employees increased 24.1 per cent, while the average number of wage earners is reported to have increased but 2.8 per cent, and the value of products manufactured 3.4 per cent.

Table 21 presents a summary of the principal industries of Wilmington from the census report for 1909. The leather industries are given first place, with 3,241 employees and products valued at $12,079,225. Next come three independent car-building plants, and three car building and repair shops operated by railroad companies, which together employed 3,466 persons and turned out products valued at $6,879,294.

TABLE 21.—*Summary of the principal industries, Wilmington, 1909.*

Industries.	Number of establishments.	Total number of persons engaged.	Proprietors and firm members.	Salaried officers, superintendents and managers.	Clerks.		Wage earners 16 years of age and over.[1]			Wage earners under 16 years of age.[1]	Value of products.
					Male.	Female.	Total.	Male.	Female.		
Leather, tanned, cured, and finished	16	3,241	12	52	105	27	3,045	2,311	719	15	$12,079,225
Steam railroad cars, not including operation of railroad companies	3	1,837	....	42	111	5	1,679	1,664	14	1	3,628,093
Cars and general shop construction and repairs by steam railroad companies	3	1,629	....	27	77	....	1,525	1,522	.....	3	3,251,201
Bread and bakery products	36	269	36	4	19	12	198	167	28	3	629,124
Printing and publishing	22	297	14	17	43	13	210	147	51	12	373,313
Tobacco manufactures	16	195	16	2	3	....	174	37	128	9	234,219
Carriages and wagons and materials	11	127	14	5	4	1	103	102	1	....	180,802
Lumber and timber products	4	23	5	....	....	....	18	18	.....	....	30,142
All other industries	150	8,677	93	265	482	126	7,711	6,495	1,065	151	17,663,254
Total	261	16,295	160	414	844	184	14,663	12,463	2,006	194	38,069,383

[1] Average number.

Under "all other industries" are included the three great war munitions companies which have headquarters in Wilmington. One of these is the largest single manufacturing establishment in the city. The chamber of commerce report states that millions of dollars are invested in this gigantic enterprise, which has numerous plants in various parts of the United States.

According to the report of the chamber of commerce the principal products manufactured in Wilmington in the general order of their importance are:

Glazed kid.
Leather.
Steel and wooden ships.
Steel and wooden railroad cars.
Car repairing.
Iron, steel, and brass castings.
Specialized machinery.
Vulcanized fiber.
Machine tools.
Rubber hose.

Tobacco.
Cotton goods and textiles.
Hosiery.
Talking machines.
Paper.

Soda-pulp.
Paper and sugar-mill machinery.
Plumbing fixtures and supplies.
Leather belting.
Refrigerating machinery.

Brick and terra cotta.
Paints and chemicals.

Architectural woodwork.
Aluminum castings.
Structural iron.

Boilers.
Car wheels.
Marine engines.
Jute.
Kaolin.

Explosives.
Ribbon.
Valves.

ANALYSIS OF PRINCIPAL INDUSTRIES.

The limited time and force available made it impossible to undertake a detailed study of the industries of Wilmington. Using as a basis the findings of the vocational education survey of Richmond, Va.,[1] groups of laborers, employers, and others were consulted, and these findings, as they applied to several of the more important groups of trades in Wilmington, were corrected to meet conditions in that city.

As shown in Table 7, page 18, 57.9 per cent of employed males and 30 per cent of employed females were engaged in manufacturing and mechanical industries in 1910.

(a) THE METAL-WORKING INDUSTRIES.

The metal-working industries, together with the leather industries, are the most important in the city. As already stated, the products of the metal-working industries include steel ships, railroad cars, car repairing, castings, specialized machinery, machine tools, talking machines, plumbing fixtures and supplies, structural iron, boilers, car wheels, marine engines, valves, etc.

The processes in the various trades of this group seem to be about the same as those outlined in the Richmond survey report, although the trades do not seem to be quite so highly specialized as indicated therein.

The consensus of opinion of a group of workers representative of the different trades of this occupational group was that the numbers of journeymen employed in Wilmington in the different trades are about as follows:

[1] See "Vocational Education Survey of Richmond, Va.," Bulletin 162, U. S. Bureau of Labor Statistics, Washington, D. C.

Puddlers, 25.
Heaters, 25.
Rollers, 15 to 20.
Wood pattern makers, 45.
Metal pattern makers, 6.
Iron molders, 200.
Brass molders, 30.
Machinists, normally 1,000 (now 1,200 to 1,500).
Core makers, 50 (also some girls).
Blacksmiths, 60.
Boiler makers, riveters, and buckers, 500.
Pipe fitters, 200.
Railway car and ship painters, 300.
Tinsmiths, sheet metal workers, and car repairers, no estimates given.

At the time this inquiry was made there was a demand for skilled workers in all these lines, and there was difficulty in getting enough men to supply the demands. Normally the supply is about equal to the demand.

The metal-working trades are organized, varying from about 40 per cent to about 80 per cent.

(b) THE BUILDING INDUSTRIES.

As is usual in all cities, these industries are important. Carpenters and joiners are classed together as carpenters. Within the city limits framed structures are restricted to one-story buildings or small additions, and special permits are required for these. There is considerable demand for carpenters in the frame parts of ships (these frame parts are almost entirely above deck, as the construction below deck is chiefly metal).

The men consulted in this group of industries also reported at the present time a phenomenal demand for almost all classes of workers, also that normally the supply and demand are about equal.

The workers in the different building trades were reported to be in numbers as follows:

Carpenters and joiners, 500.
Bricklayers, 170.
Stonemasons, 50.
Stone setters and stonecutters, 15.
Structural ironworkers, few in the city, imported when needed.
Sheet metal workers: Inside, 75; outside, 75.
Plumbers and steam fitters, 200 to 250.
Inside wiremen, 150.
Plasterers, 50.
Machine woodworkers and cabinetmakers, 800.
Painters and paper hangers, building trades, 200.
Ship and car painters, 200.
Laborers, chiefly Italian, some colored, short supply.

The building trades are to a considerable extent organized. Some trades are almost completely organized, some 80 per cent, while several are not organized at all.

(c) PRINTING INDUSTRIES.

A group of men representing these industries estimated that there were about 120 workers in the printing trades, 104 men and 16 women. They grouped these as follows: Linotype machine operators, 20; makers-up and stone hand men, 8; monotype machine operators, 8; hand compositors, 84.

There are about 6 or 8 stereotypers in Wilmington. The proof readers are chiefly boys and women. The hand composition is chiefly in the job offices. There are about 12 cylinder pressmen and 50 press feeders, the last chiefly girls. There are no steel or copper plate engravers or plate printers, no die stampers or packers, litho-engravers or transferrers, lithopressmen or feeders. Two photo-engravers, but no etchers, were reported. Twenty bookbinders, 8 men and 12 women, were reported.

The printing trades were reported as about 50 per cent organized.

(d) WAGES AND HOURS OF LABOR.

In Wilmington the general impression seems to be that wages compare favorably with those paid in other communities for the same work.

The report of the General Service Board of Delaware makes the following statement about general labor conditions in Wilmington:[1]

No detailed statistics on wage standards in the State or in Wilmington are available. Though Wilmington is an "open" town, the labor unions have been active. The Central Labor Union in Wilmington represents at present about 5,000 members in the various organizations composing the central body. This number includes one organization of women, but does not include any of the railroad organizations.

There are no State labor provisions for male wage earners. The legal day for all classes of city employees in Wilmington is eight hours (policemen, special officers, etc., excepted), and all classes of workmen on city work, whether employed directly or through contractors, must be paid at not less than the prevailing rate per day in the same trade in the locality where the work is done.

In spite of Wilmington's size and industrial development there is in general a provincial community relation between employer and employee, and there have never been in the city or State the bitter and violent conflicts between employer and employee which have disrupted other communities. The employers, as far as can be judged, are willing to stand for square dealing with their employees, as the employer honestly sees his duty. Many employers have completely changed their attitude toward labor as a result of changes in industrial and social conditions in recent years and are facing the difficulty of putting into practice reforms in which they thoroughly believe and at the same

[1] See report of the organizing committee of the General Service Board of Delaware, 1914–15; Miss Jeannette Eckman, secretary, Wilmington, Del.

time having to compete with less progressive employers. While the increased cost of living and protracted periods of unemployment have put great pressure on the wage earner, the history of labor, on the whole, as has been pointed out, shows a freedom from selfish and ill-timed aggressions.

Taking these two aspects of the matter into consideration, there seems to be already in the local situation the basis of the principles of procedure most strongly advocated and indorsed at present by a number of active agencies in the city; that is, cooperation between employer and employees and the working out of a sound industrial policy for the State through careful and thorough study of local labor conditions and problems.

The Labor Commission of Delaware, consisting of five members, unpaid, one from each county and two at large, appointed by the governor, was created in 1913 by the legislature. This commission, which combines the administration of the child labor law and the "10-hour" law for women's labor, is the first step in the State toward the centralized handling of labor problems and conditions. Besides these two laws, the only other State provisions affecting labor are those which are made by the State board of health regarding labor camps, and the provisions of the cannery sanitation law regarding housing conditions for employees, and the sanitary precautions required of employers; also the irrigation commission is empowered to import labor for work on farms.

At both the 1913 and 1915 sessions of the legislature, bills introduced to create a "department of labor, industries, and social welfare" failed to pass.

The "10-hour" law for woman's labor limits the hours of employment to 10 per day, with an allowance of 12 hours for one day only during the week providing that the total hours of employment during the week does not exceed 55. Night work, any part of which is between 11 p. m. and 7 a. m., must not exceed 8 hours in any night.

Fruit and vegetable canning establishments do not come under this law. The employers and working girls are much interested in this "10-hour" law, and in general the former heartily cooperate with the labor commission in seeing that the law is enforced.

For the expenses of the labor commission, annual appropriations are made as follows: Salary of the labor inspector, $1,800; salary of his assistant (who is a woman), $1,000; general expense, $1,000.

Regarding the cannery-inspection law, the report of the General Service Board of Delaware has this to say:

The provisions of this law are under the administration of an inspector appointed by and directly responsible to the governor of the State. He serves at a salary of $1,000, with an appropriation of $500 for expenses.

A few of the canning factories in Delaware are still in very bad condition. And others, partly owing to the newness of the law, have not yet met all the requirements, but the better-class establishments come up to the general stand-

ards of the law, and are apparently cooperating with the inspector in an effort to comply with the details.

The canneries inspection law is one of the strongest and best laws in the State. The new part of the law passed in 1915 has adequate sanitary requirements for all establishments in which fruits and vegetables are canned or preserved, and gives the inspector full power for a strict enforcement of the law in every detail. He is to cause all offenders to be prosecuted in the court of general session of the county where the offense is committed, or he may close the factory in which violations occur until the necessary changes are made according to his directions. Sheriffs and constables are required by law to assist in the enforcement of the inspector's directions whenever called upon by the inspector.

Under an act of the legislature in 1915, the inspection of all abattoirs outside of Wilmington is also the duty of the canneries inspector.

Tables 22 and 23 give the information available concerning the years of apprenticeship, wages of apprentices and journeymen, and hours of labor in the metal trades and building trades in Wilmington. These facts were obtained from inquiries sent to manufacturers and from conferences with groups of workmen representing the different trades.

TABLE 22.—*Age of efficient entrance, years required to learn the trade, and wages in the metal-working trades—Wilmington.*

Firm.	Products or specialties.	Age of entrance.	Years to learn the trade.	Wages of apprentices, per week.					Wages of journeymen, per week.
				First year.	Second year.	Third year.	Fourth year.	Fifth year.	
1	Leather-working machinery.	16	5	$3.00	$3.50	$4.00	$4.50	$5.00	25 to 35 cts.[1]
2	Steel castings	.....	4	5 cts.[1]	7½ cts.[1]	10 cts.[1]	12½ cts.[1]	.....	
3	Roofing, furnaces	16	4	$3.50	$4.50	$6.00	$8.00	.....	$16-$20.
4	Marine gas engines	17	4	$2.50	$3.50	$4.50	$5.50	.....	$14 - $25.
5	Machine tools	16	.....	.....	.....	.....	.....	.....	
6	Ships, cars, engines, etc.	18	4	5 cts.[1]	6¾ cts.[1]	8½ cts.[1]	10 cts.[1]	.....	
7	Refrigerating machinery.	16-18	5	$3.00	$3.50	$4.00	$4.50	$5.00	$28-$36.
8	Ships, general machinery.	.....	.....	10 cts.[1]	.....	.....	.....	.....	20 to 40 cts.[1]
9	Leather-working machinery.	16	5	$3.00	$4.00	$5.00	$6.00	$7.00	$12-$20.
10	Fertilizer machinery.	16	5	$4.00	$4.50	$5.00	$6.00	$7.00	28 to 33⅓ cts.
11	Machinery	.....	4	$4.00	$5.00	$6.00	$7.00	.....	
12	Cars	.....	.....	10 cts.[1]	12 cts.[1]	14 cts.[1]	16 cts.[1]	.....	
13	Car wheels	.....	4	$3.00	$4.00	$5.00	$6.00	.....	

Hours of labor: Forty-eight per week for the most part; some have Saturday afternoon off; some work 54 hours per week.

[1] Per hour.

TABLE 23.—*Years required to learn the trade and wages in the building trades—Wilmington.*

Building trades.	Years to learn the trade.	Wages of apprentices, per week.					Wages of journeymen.	Hours of labor per week.
		First year.	Second year.	Third year.	Fourth year.	Fifth year.		
House carpenters, ship joiners.	4	$3–$4	$4–$5	$5–$6	$7–$8	.....	35 to 45 cts.[1]	48
Bricklayers	.....	$5–$6	.....	.....	$10–$12	.....	60 cts.[1]	44
Stonemasons	.....	(2)	.....	.....	.....	.....	$2.50—$4	.....
Stone setters and cutters	.....	(2)	.....	.....	.....	.....	About $4[3]	.....
Cement finishers	.....	(2)	.....	.....	.....	.....	$4 (helper $2)[3]	
Sheet-metal workers	.....	$3.50–$4.50	$4.50–$5.50	$5.50–$6.50	$6.50–$7.50	.....	35 to 45 cts.[1]	.....
Plumbers, steam fitters	.....	(4)	.....	.....	.....	.....	40 cts.[1]	.....
Inside wiremen	5	(4)	.....	.....	.....	.....	40 cts.[1]	
Plasterers	4	$5–$6	$6–$7	$7–$8	$8–$9	.....	60 cts.[1]	.....
Machine woodworkers, cabinetmakers.	.....	(5)	.....	.....	.....	.....	$5[3]	.....
Painters, paper hangers	.....	.....	.....	.....	.....	.....	$3–$3.20	[3] 8 to 9½
Laborers	.....	.....	.....	.....	.....	.....	15 to 25 cts.[1]	.....

[1] Per hour.
[2] No apprentices.
[3] Per day.
[4] Apprentices, $1 per day; helpers, $2 per day. Apprentices, $1 per day for two years; then helpers, at $2 per day for three years.
[5] Apprentices start at $8 per week.
Age of efficient entrance: For house carpenters, ship joiners, and bricklayers, 16 years; for other trades not reported.

In the printing trades, beginners usually receive $3 to $4 per week during the first year, with gradual increases during the apprentice period, which is nominally five years. No regular scale seems to be followed in all shops, however.

The union scale of wages is as follows: Day shifts, hand compositors, $18; machine operators, $21; night shifts, $2 per week higher. The nonunion wages paid range from $10 to $15 for men, and $6 to $8 for women.

The age of efficient entrance is placed at 16 years for apprentices and 21 years for journeymen.

The hours of labor in union shops are eight per day, and in nonunion shops, nine. Book and job printing shops close at noon on Saturdays; shops in which afternoon papers are printed work a full day on Saturday.

Union regulations allow one apprentice to five journeymen.

LACK OF UNIFORMITY OF CONDITIONS.

A study of the facts presented makes clear that working conditions in these industries in Wilmington are far from uniform, either as to wages or hours of labor. The initial wage of the apprentice in the metal-working trades ranges from 5 cents per hour, or $2.40 for a 48-hour week, to 10 cents, or $4.80. The wage paid during the fourth year of apprenticeship varies almost as much, ranging from

$4.50 to $8.00. In 6 of the 11 shops reporting, the wage increase from the first to the fourth year is 100 per cent or over, while in the remaining 5 it is 50 per cent or over.

Journeymen's wages range from 20 cents an hour, $9.60 for a 48-hour week, to $36, nearly four times as much. These industries, therefore, provide places for workmen of widely varying attainments and capacity.

Among all the shops reporting, there seems to be general agreement that there is no demand for young boys as beginners. The age of efficient entrance is placed at 16 years in most cases, and even higher in two cases.

Both employers and employees agree that the apprenticeship system is becoming less and less definite every year.

The representative of a large morocco company makes the statement that, so far as his knowledge goes, there have been no apprentices in the morocco business since 1886.

(e) OPPORTUNITIES FOR ADVANCEMENT.

One large manufacturer said: "Our foremen are ordinarily recruited entirely from our workmen." Other employers said: "That all men in their employ are given every possible opportunity to become familiar with the different branches of their business." Ability and interest in the business seem to be rewarded by promotion as far as possible.

(f) DEMAND IN EACH INDUSTRY FOR GENERAL EDUCATION, SPECIAL TRADE EDUCATION, AND SPECIAL MANIPULATIVE SKILL.

Groups of workers representing different trades agree in general with the findings of the Richmond survey in these particulars. Both workmen and employers agreed that at least a grammar school education is essential to success in the industries. The employers almost universally expressed a difficulty in obtaining an adequate supply of efficient workers.

Few employers considered that there is any unusual physical or nervous strain in their industries. With few exceptions, they agreed that the industries in which they are interested stimulate and promote the intelligence of their employees.

To a considerable extent the industries of Wilmington call for a high degree of skill in their workers.

Both employers and employees emphasized a need for mechanical drawing and practical mathematics for workers in many of the occupations.

Workers in different industries, especially in the metal-working, building, and printing trades, were asked to furnish information con-

cerning place of birth, education, experience, etc. The number of men responding to this request was not large enough to yield conclusive results. However, the facts brought out may be summarized briefly, as follows:

1. Place of birth: Wilmington, 79 per cent; elsewhere in Delaware, 10.5 per cent; elsewhere in the United States, 10.5 per cent.
2. With few exceptions, all had served so-called apprenticeships, ranging from three to five years, fully three-fourths serving for four years.
3. Two-thirds had had but one occupation; one-fourth, two occupations; and the others, either three or four different occupations.
4. Ages at time of leaving school varied from 10 years in the case of about 5 per cent to 18 years in the case of about 5 per cent. The largest number, about one-third, reported that they left school when 16 years of age.
5. The grades completed at the time of leaving school ranged from the fifth grade, completed by 3 per cent, to the fourth year high school, completed by about 10 per cent. The majority have completed the first year high school.
6. About 40 per cent of those reporting had made some effort to continue their education since leaving school and going to work. This schooling consisted of correspondence courses, business college courses, and other night-school work.
7. The majority had paid their own tuition for this additional schooling, and also reported that they had not completed the courses in which they had started.

(g) DEMAND IN EACH OCCUPATION FOR BOYS AND GIRLS.

Table 24, which is compiled from the 1910 census, gives the numbers of both males and females engaged in the manufacturing and mechanical industries in the State of Delaware (similar data for the city alone are not available) arranged by age groups.

TABLE 24.—*Age distribution of persons 10 years of age and over engaged in manufacturing and mechanical industries: Delaware, 1910.*

Age periods.	Per cent distribution.	
	Male.	Female.
10 to 13 years	0.1	0.6
14 to 15 years	1.0	5.9
16 to 20 years	11.7	30.5
21 to 44 years	59.0	48.3
45 years and over	28.2	14.7
Total	100.0	100.0

Of the total number of persons engaged in these industries, 1.1 per cent of the males and 6.5 per cent of the females are under 16 years of age, the age at which apprentices are received in most of the industries.

Of the males, 11.7 per cent, and of the females, 30.5 per cent are from 16 to 20 years of age, the normal apprenticeship period. Ac-

cordingly, 12.8 per cent of the males and 37 per cent of the females are under 21 years of age. The table shows that 59 per cent of the males and 48.3 per cent of the females are from 21 to 44 years of age.

Employment certificates are required by law of boys and girls of the second age group—14 and 15 years—who wish to work in mechanical and manufacturing industries, and certain restrictions are placed on holders of employment certificates. Consequently, children of these ages who wish to work are found mainly in other occupations, chiefly in offices and stores. Efficient youth are greatly in demand in these positions.

In most of the industries, apprentices and helpers are taken at the age of 16. The employers, as a rule, seem to wish to observe the regulations of the child labor law. One large manufacturer says:

> With the existing child labor law, we do not employ in this plant anybody under 16, and should there be any difficulty in the determination of the age, it is proposed to raise the limit for employing boys here to 17.

There is considerable demand for girls 14 and 15 years of age in the tobacco, leather, and textile industries. The demand in the manufacturing and mechanical industries for boys is not large until the age of 16 or 17 is reached.

At the present time in Wilmington, no earnest and industrious boy of 16 or over who has a common-school education and a reasonable amount of ability need have any trouble in getting good employment in the industries.

SUMMARY OF FINDINGS.

1. The City of Wilmington is a thriving industrial center with approximately one-fifth of its population engaged in manufacturing. The 260 different industrial establishments represent a wide range of industries, several of which are large and important.

2. The range of skill demanded in the industries is large. An unusually large number of workers are employed either in unskilled occupations or in those requiring a low degree of skill. A smaller number are employed in very highly skilled work.

3. The relations between employer and employee are exceptionally good, forming a basis for cooperation in trade agreements and vocational education. Also the labor commission of the State, together with a number of active civic organizations, have made a strong backing for coöperative efforts along these lines. Fairly satisfactory labor laws have been passed by the State, but there is a weakness in the means provided for their enforcement.

4. As usual throughout the country, the apprenticeship system is broken down and trade agreements are almost unknown. Helpers

take the place of apprentices and there is little opportunity for a thorough and broad training in the industry. Both employers and employees acknowledge and lament this fact.

5. Ninety per cent of the workers who reported were born in Delaware and 80 per cent in Wilmington. To a considerable extent then the city must train her own workers, and they are apt to stay to work in her own industries. This simplifies the industrial education problem.

6. The need for more education, especially of a practical nature, is manifested by both workers and employers. More schooling in the practical arts and in the fundamental subjects of the curriculum is desired by the workers for their children before they leave school. The workers manifest a desire also for evening schools for themselves.

CHAPTER IV.

YOUNG PEOPLE IN THE INDUSTRIES.

Two forms of working permits are granted by the State.[1] These are called "street-trades permits" and "employment certificates." A detailed study was made of holders of both of these classes of permits.[2]

I. BOYS HOLDING STREET-TRADES PERMITS.

Permits are issued by the superintendent of schools to boys under 14 years of age who wish to work at certain occupations outside of school hours, either during the summer or at other hours and days when the schools are not in session.

A boy wishing a permit must appear personally with a parent or guardian. He must present a statement from his school principal stating that, in his opinion, the applicant has reached the normal development of a child of his age, is an attendant at the school designated, is physically and mentally fit for the employment desired, and is able to do such work in addition to the regular school work as required by law. The boy must also present certified evidence of his age. The applicant is granted a card and a badge which he must carry with him while at work.

A weak point about this "street-trades permit" law in Delaware is that no minimum age limit is provided below which such permit will not be granted. If the applicant satisfies the requirements mentioned above, he is entitled to a permit.

Street-trades permits are legal for but one year (during the calendar year), and must be renewed each year. The numbers of such permits which have been issued are as follows: Previous to 1915, 305; during 1915, 165; during 1916 up to January 18, 45.

A detailed study was made of 150 of these permits which were issued during 1915. Tables 25 to 28 show the results of this study.

[1] See page 10.

[2] For copies of forms used for this purpose, see Appendixes C, D, E.

TABLE 25.—*Races, ages, and places of birth of boys holding street-trades permits—Wilmington.*

Race.	Number of boys of each age.					
	10 years.	11 years.	12 years.	13 years.	14 years.	Total.
White	.....	4	64	72	8	148
Colored	1	.....	.....	1	.....	2
Total	1	4	64	73	8	150

Places of birth.	Number.
Wilmington	110
Elsewhere in Delaware	11
Elsewhere in the United States	18
Foreign countries	10
Not reported	1
Total	150

The fact that only two permits were issued to colored boys, as shown in table 25, was explained by the statement that very little work open to colored boys was available. However, this fact, and the fact that only a small number of parochial-school boys were granted permits, are probably better explained by the lack of sufficient facilities for enforcing the child-labor laws. The public school authorities issue the street-trades permits and employment certificates, and therefore are in a better position to check up on their own pupils than on those in parochial and private schools. At the same time it is probably true that few boys of these ages in private schools would have occasion to apply for working permits.

While the number of individuals concerned is small, 150, it is worthy of note that 110 boys were born in Wilmington and only 10 were born outside of the United States.

As shown in Table 26, more than four-fifths of the boys are engaged in running errands or selling newspapers. The initiative of certain magazines of large circulation has shown the possibilities of training in salesmanship and business principles through proper organization of the work of newsboys. It is possible that equally valuable results would follow organization of the work of running errands and delivering messages.

Although the blank form of record filed in the office of the superintendent of public schools has a space for recording the reasons for going to work, these reasons are seldom given, as shown in Table 26. It would seem important that such reasons be stated.

TABLE 26.—*Occupations of boys holding street-trades permits, time when occupied, and reasons given for going to work.*

Occupations:	Number.
Errand boy	94
Newsboy	32
Helper for huckster	9
On milk wagon	6
Service and milk	2
Lamp lighter	1
Clerk	1
Telephone boy	1
Not reported	4
Total	150
Time when occupied:	
Out-of-school hours	75
Summer vacation	61
Both	13
Not reported	1
Total	150

Reasons given for going to work:	Number.
To earn money	8
To help mother	5
To make spending money	4
To help father	4
To keep out of mischief	3
To buy clothes	2
To earn money for fee for private school	1
To buy violin	1
Illness of father	1
Parents dead	1
No reasons given	120
Total	150

Table 27 shows that, while probably the school records of permit boys seem to justify the belief in their ability to do work outside of school hours, there is room for improvement in the character of their school work. The authorities should refuse to issue permits in all cases in which the school reports are not furnished.

TABLE 27.—*School records of boys holding street-trades permits—Wilmington.*

	Good.	Fair.	Poor.	Not reported.	Total.
Character of school work	32	31	22	65	150
School attendance	77	16	7	60	150
Conduct while at school	53	34	13	50	150

Kind of school attended at time of issue of permit:	
Public	136
Parochial	12
School outside of the city	1
Not reported	1
Total	150
Physical condition of boys at time of issue of permit, as shown by comparison of weight reported with standard weight for age reported:	
Number under weight for age	64
Number of normal weight for age	9
Number over weight for age	77
Total	150
Number of boys who permanently withdrew from school during the year 1915	17

TABLE 28.—*Age-grade distribution of boys holding street-trades permits—Wilmington.*

Grades.	Number of boys of each age.					
	10 years.	11 years.	12 years.	13 years.	14 years.	Total.
3		1	2	1		4
4	[1] **1**	1	9	3		14
5		2	14	12	1	29
6			[1] **25**	21	1	47
7			10	26	4	40
8			4	10	1	15
I					1	1
Total	1	4	64	73	8	150

Number of boys who are over age, 70, or 46.6 per cent.

[1] Black-faced figures show the number of boys of normal advancement.

While each permit is granted only on a statement of the school principal that the child has reached a stage of physical development commensurate with the normal development of a child of his age, a careful comparison of the age and weight of each child with adopted standards based on average weights of a large number of boys shows that 64, or 42.6 per cent, of the boys are under weight. Evidently this situation should be investigated further.

The significance of these figures is emphasized by a study of the age-grade classification of these boys. Table 28 shows that nearly one-half, or 46.6 per cent, of the boys are over age. The same table also suggests the probability that these boys will drop out of school in large numbers as soon as the end of the period of compulsory schooling is reached.

II. HOLDERS OF GENERAL EMPLOYMENT CERTIFICATES.

Employment certificates are necessary for all children between the ages of 12 and 16 years who wish employment "in any of the occupations or processes in which a child" of these ages may be employed legally.[1]

These are of two classes: General employment certificates for children who are 14 or 15 years of age and who wish to work during the entire year, and vacation employment certificates for children who are at least 12 years of age but have not reached the age of 16 and wish to work at such times during the year when the law does not require them to attend school.

Employment certificates have been issued in the following numbers: During 1914, 790; during 1915, 858; in 1916 up to January 18, 21; total, 1,669.

[1] See page 10.

A detailed study was made of 653 of these employment certificates—445 boys and 208 girls. Three boys are colored. The birth places of these boys and girls are as follows:

	Boys.	Girls.
Wilmington	302	148
Elsewhere in Delaware	26	10
Elsewhere in the United States	79	25
Foreign countries	37	25
Not reported	1	—
Total	445	208

The last schools attended before applying for certificates are reported as follows:

	Boys.	Girls.
Public school	296	113
Parochial school	122	80
Private school	8	3
School outside of the city	14	10
School not reported	5	2
Total	445	208

In less than two-thirds of the schools records of holders of general employment certificates was information given as to the last grade attended. Table 29 shows this grade distribution as far as records were available.

TABLE 29.—*Ages and school grades completed by holders of general employment certificates—Wilmington.*

Grade completed.	Number of each age at time of leaving school.					
	Boys.			Girls.		
	14 years.	15 years.	Total.	14 years.	15 years.	Total.
1				1		1
2	4	1	5	1	1	2
3	6	5	11	13	1	14
4	25	5	30	15	3	18
5	52	18	70	23	8	31
6	71	14	85	19	3	22
7	41	17	58	14	8	22
8	12	8	20	2	3	5
I	6	2	8	1	1	2
Total	217	70	287	89	28	117

Number of boys of normal advancement (black-face figures), 63, or 21.9 per cent; girls, 20, or 17 per cent.

Of the 287 boys reporting, 218, or 75.9 per cent, were over age for the grades which they had completed at the time of leaving school, assuming that a normal boy should have completed the seventh grade at 14 years of age and the eighth grade at 15 years. On the same basis, 96 of the 117 girls reporting, or 82 per cent, were over age. These facts harmonize with the conclusions reached by other investi-

gators that there is some causal relation between the school retardation, with the consequent discouragement and dissatisfaction, and the decision to leave school and apply for work permits.

No record could be found of any of these girls reëntering school after having been granted an employment certificate, though one boy was found to have done so. Fewer than one-half of these girls and three-fifths of the boys had completed the sixth grade.

Table 30 shows that only 23.9 per cent of the boys and 17.8 per cent of the girls who received employment certificates were of normal school age or below. The others ranged from one to six years behind their normal grades. More than one-fifth of the boys, 22.2 per cent, and one-third of the girls, 36.6 per cent, were three years or more behind the grades which they should have completed.

TABLE 30.—*Summary of age-grade distribution of holders of general employment certificates—Wilmington.*

Classes.	Boys.		Girls.	
	Number.	Per cent.	Number.	Per cent.
Under normal age for grade completed	6	2.0	1	0.8
Of normal age	63	21.9	20	17.0
One year behind normal grade	88	30.7	27	23.0
Two years behind normal grade	66	23.0	26	22.2
Three years behind normal grade	43	15.0	23	19.6
Four years behind normal grade	11	3.8	16	13.6
Five years behind normal grade	9	3.1	2	1.7
Six years behind normal grade	1	.3	2	1.7
Total who are one or more years behind grade	218	75.9	96	96.5
Grand total	287	100.0	117	100.0

As shown in Table 31, records of the quality of school work done are available for only a small proportion of the holders of general employment certificates—37 per cent of the boys and 42.8 per cent of the girls. Here again the maintenance of accurate records is urged.

Although a variety of reasons are given for leaving school to go to work (see Table 32), it appears probable that in many cases the main reason is that the boy or girl was falling behind in school, and becoming discouraged preferred to go to work rather than to continue in school. Only 164 boys and 111 girls, 42.1 per cent of the total number, report "necessity" as the reason for going to work, while 96 "dislike school" or were "doing poor work," and 97 applied for certificates to work "during the summer or on holidays."

TABLE 31.—*School records of holders of general employment certificates—Wilmington.*

Classes.	Number of boys reported in each class.							
	Excellent.	Very good.	Good.	Fair.	Poor.	Regular.	Irregular.	Not reported.
Quality of school work done in last grade completed	.....	16	60	81	8	.....	.....	280
Quality of school work in grades below this grade	3	22	73	59	7	.....	.....	281
Attendance at school	.....	.....	.....	.....	.....	117	58	270
Deportment at school	7	35	78	45	7	.....	.....	273
NUMBER OF GIRLS REPORTED IN EACH CLASS.								
Quality of school work done in last grade completed	30	.....	41	18	.....	.....	.....	119
Quality of school work in grades below this grade	27	.....	36	19	2	.....	.....	124
Attendance at school	.....	.....	.....	.....	.....	63	28	117
Deportment at school	57	.....	28	5	.....	.....	.....	118

TABLE 32.—*Reasons assigned for going to work by holders of general employment certificates—Wilmington.*

Reasons assigned.	Boys.	Girls.	Total.
Necessary	164	10	174
Family needs the money	.....	101	101
To work in summer or on holidays	86	11	97
To make money	60	32	92
Dislike school	70	15	85
Doing poor work at school	11	.....	11
Father wants boy to work	4	.....	4
Weak eyes or other physical weakness	3	1	4
Attending business college at night	1	1	2
Has completed course in parochial school	1	.....	1
To leave the city soon	1	.....	1
To keep boy off the street	1	.....	1
Reason not given	43	37	80
Total	445	208	653

A shown in Table 33, nearly three-fifths of the opportunities open to boys holding general-employment certificates were found in manufacturing and mechanical industries; approximately one-third found employment in stores; while fewer than one-tenth were employed in offices. While the great majority of these occupations are necessarily unskilled, it is altogether likely that many of them represent real opportunities for the capable and energetic boy to gain a foothold in the industrial or commercial world from which he may climb to better things. The indispensable conditions to such advancement, however, are ambition, organization of industry in such a way as to facilitate promotion, and education to fit the boy to assume greater responsibility.

TABLE 33.—*Positions which have been held by boys holding general-employment certificates—Wilmington.*

(NOTE.—This list includes the total number of positions held by 394 boys, 51 boys not reporting. Of the 394 boys, 152, or 38.5 per cent, have held more than one position.)

Employer.	Number.	Per cent.
Employees in manufacturing establishments	358	58.4
Laborers (work not specified)	114	
Woolen mills worker	34	
Folder and sorter	32	
Rivet passer and heater	18	
Iron sorter	13	
Apprentice	12	
Machine boy	12	
Shipping room work	10	
Hose worker	10	
Doffer	9	
Mail boy	8	
Bobbin boy	5	
Core maker	5	
Packer	5	
Baker	4	
Punching machine operator	4	
Drafting room helper	4	
Testing cans	3	
Yarn boy	3	
Tuber	2	
Threading machine operator	2	
Car builder	2	
Turner	2	
Patternmaker	2	
Bottle works employee	2	
Fitter	1	
Catcher	1	
Spinner	1	
Tin shop employee	1	
Picking spools	1	
Chalker	1	
Nail driver	1	
Spreader	1	
Counter	1	
Drill-press operator	1	
Nickel plater	1	
Employees in stores, etc.	203	33.1
Errand boy	112	
Messenger	58	
Delivery boy	16	
Clerk	6	
Elevator boy	3	
Usher	2	
Huckster	2	
Floor boy	2	
Butcher shop employee	1	
Salesman	1	
Employees in offices	52	8.5
Office boy, etc.	52	
Total number of positions reported	613	100.0

Table 34 shows that more than nine-tenths of the girls holding employment certificates found their opportunities in manufacturing establishments; only 6.1 per cent found employment in stores; while only 1.1 per cent found employment in offices; and not a single case of employment in homemaking occupations is reported. The wide

variety of occupations represented in Tables 33 and 34 suggest the difficulties involved in planning vocational courses for young persons of these ages that will have definite relation to specific occupations.

TABLE 34.—*Positions which have been held by girls holding general-employment certificates—Wilmington.*

NOTE.—This list includes the total number of positions held by 193 girls, 15 girls not reporting. Of the 193 girls, 76, or 39.3 per cent, have held more than one position.)

Employees.	Number.	Per cent.
Employees in manufacturing establishments	258	92.8
Cigar maker	30	
Roller	25	
Doffer	22	
Knitter	21	
Helper	20	
Turner	20	
Stripper	12	
Mill hand	11	
Trimmer	10	
Looper	9	
Seasoning	8	
Laundry girl	7	
Glacier	7	
Winder	7	
Folding room girl	6	
Packer	5	
Spinner	5	
Bander	5	
Sealing	4	
Operator of machine	4	
Mender	3	
Cutter	2	
Finisher	2	
Core-maker	2	
Sorter	2	
Bender, marker, sander, weigher, filler (1 each)	5	
Puncher, inspector, bundler, examiner (1 each)	4	
Employees in stores	17	6.1
Saleslady	12	
Milliner	2	
Store girl, cash girl, clerk (1 each)	3	
Employees in offices	3	1.1
Filing clerk	2	
Bookkeeper	1	
Total number of positions reported	278	100.0

Table 35 shows the number of positions held by the boys and girls reporting. The proportions of boys and girls who have held one position only are approximately the same—61.4 per cent and 60.6 per cent, respectively. However, 56 boys and 21 girls have held three or more positions each, presumably during the two-year period covered by the employment certificate legislation. One girl has held over 7 different positions and one boy reports 10.

TABLE 35.—*Number of positions held by holders of general-employment certificates—Wilmington.*

Number of positions held.	Boys.	Girls.	Total.
1	242	117	359
2	96	55	151
3	37	14	51
4	13	4	17
5	4	2	6
6	1	.....	1
7	.....	1	1
10	1	.....	1
Number of individuals reporting	394	193	587
Number not reporting	51	15	66
Total	445	208	653

The State child labor inspector is authority for the statement that, of the 1,648 employment certificates which had been issued up to January 1, 1916, about 700 were active at the date of this inquiry. A large number of the holders of these certificates have passed the age of 16, when they are no longer required, a number have moved from the city, and a few have returned to school. The inspector said that he had located all holders of active employment certificates except about six or seven.

The inspector also stated that there are in all probability at least 500 to 600 children 14 or 15 years of age who do not have employment certificates and are not in school. Many of these have had street-trades permits. A few of these have been found working under fictitious ages.

The inspector was of the opinion that the reason for so many different jobs being held by the same boys and girls is because fully 60 per cent of them are not dependable. The employers are anxious to secure the services of dependable boys and girls, but many of these young persons leave their places of employment without notice, and often because they think they can get an easier position or one which pays a little more money.

Frequently the children who have held the greatest number of different positions have changed the *kind of work* every time a new position was secured. As a rule there is small chance for much advancement in position or wages for employment certificate holders.

Few employment certificates are issued to colored boys, as very few jobs are open to them.

The chief reason why so many certificates are issued with no statement as to the position to be held is because the applicant has no definite position in view but hopes to secure one after getting the certificate. In many cases the child gets no job.

Employers are often lax about returning the certificates, as required by law, when the holder leaves their employ.

III. SPECIAL PERMIT BOYS AND GIRLS.

The State law provides for the issuing of special permits in extraordinary cases.[1] Only a few of these are granted each year. During the last 10 months of the year 1915, 31 such special permits were granted. Of these, 18 were granted because of the dire need of the parents of the applicant and 13 because of irregular school records, lack of birth records, physical condition under normal, and other special reasons.

Special permits also are necessary for workers in theaters or concert halls who are under the age of 16 years.

IV. EMPLOYED BROTHERS AND SISTERS.

The boys and girls 13 and 14 years of age in the public schools (records from 704 boys and 649 girls were received) were asked to give the names and addresses of brothers and sisters who were under 21 years of age and were at work. The names of 726 boys and girls were secured by this means, to whom letters and blank forms to be filled out were sent.[2]

Blanks from 107 boys and 54 girls were returned. Almost 100 letters were returned unclaimed, indicating that some addresses were erroneously given and that a number had changed their addresses.

The boys and girls ranged in age from 12 to 21 years, all but 24 being from 16 to 20 years of age (Table 36).

TABLE 36.—*Age distribution of employed brothers and sisters of public school pupils 13 and 14 years of age—Wilmington.*

Ages.	Boys.	Girls.	Total.
12 years	1		1
13 years			
14 years	3		3
15 years	13	4	17
16 years	20	8	28
17 years	15	14	29
18 years	18	11	29
19 years	16	6	22
20 years	19	10	29
21 years	2	1	3
Total	107	54	161

As shown in Table 37, more than one-half of these employed brothers and sisters were born in Wilmington, and only 20, or 12.4 per cent, were born outside of the United States.

[1] See page 10. [2] See Appendix F.

TABLE 37.—*Birth places of employed brothers and sisters.*

Birthplaces.	Boys.	Girls.	Total.
Wilmington	56	28	84
Elsewhere in Delaware	12	5	17
Elsewhere in the United States	24	15	39
Foreign countries	14	6	20
Not reported	1	.....	1
Total	107	54	161

As shown in Table 38, all but 15 of these young people who reported had attended the public schools. This is to be expected, since they are the brothers and sisters of public-school pupils. The significant fact disclosed by this table is that nearly nine-tenths of these brothers and sisters, 89.4 per cent, had attended the public schools in Wilmington.

TABLE 38.—*Distribution of schools attended by employed brothers and sisters.*

Location of last school attended.	Attending public schools.		Attending parochial or private schools.		Total.	
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.
Wilmington	88	34	5	9	93	43
Elsewhere in Delaware	3	.....	.....	.....	3	.....
Elsewhere in the United States	5	4	1	.....	6	4
Foreign countries	.....	3	.....	.....	.....	3
Not reported	.....	.....	.....	.....	5	4
Total	96	41	6	9	107	54

Further, as shown in Table 39, these young people had gone to work with all degrees of educational preparation as represented by the work offered in the schools. One boy reported only having completed the first grade (this may be erroneous). The others, whose reports seem perfectly clear, had completed grades three to eight inclusive, and 24 boys and 9 girls reported having completed at least one year of a high-school course (one boy stated that he had had a little college work). Four boys and one girl had completed a four years' high-school course. One-half of both the boys and the girls had gone to work with a seventh-grade education or less.

TABLE 39.—*Grades in school completed by employed brothers and sisters.*

Grades completed.	Boys.	Girls.	Total.
1	1		1
3		1	1
4	5	2	7
5	5	3	8
6	19	10	29
7	20	14	34
8	23	13	36
I	8	1	9
II	4	4	8
III	8	3	11
IV	4	1	5
Not reported	10	1	11
Total	107	54	161

Approximately one-half of both the boys and the girls left school at the end of the compulsory educational period or before, as shown in Table 40. Almost all reported that they left school to go to work.

TABLE 40.—*Ages at which employed brothers and sisters left school.*

Ages at leaving school.	Boys.	Girls.	Total.
At 14 years of age or under (end of compulsory period)	52	28	80
Over 14 years of age (six months to five years beyond compulsory period)	50	25	75
Not reported	5	1	6
Total	107	54	161

It is instructive to note what voluntary efforts these boys and girls (the majority of whom had left school as soon as the law permitted them to do so, and with an education represented by the seventh grade or less) have made to continue their education after having gone to work. Table 41 furnishes a summary of these efforts.

TABLE 41.—*Efforts to continue education as reported by employed brothers and sisters.*

Courses taken.	Number reporting evening-school courses.		Number reporting correspondence-school courses.	
	Boys.	Girls.	Boys.	Girls.
Commercial courses	15	3	1	3
Common-school branches		2	3	
Moving-picture machine operators	1			
Engineering			1	
Carpentry			1	
Drafting			1	
Teacher's branches				1
Sewing				1
Not specified	16	1	4	
Total	32	6	11	5

NOTE.—56 boys and 30 girls report that they draw books from the public library.

Almost one-half of the boys, but only one-fifth of the girls, reported having done some night-school or correspondence-school work. Unfortunately the character of this is not specified. But as commercial or business courses are specified in the greatest number of cases and as, with the exception of the work of the Y. M. C. A. night school, little opportunity for continuation school work is offered except by the business colleges, it is probable that these unspecified courses are largely of a commercial nature.

One-half of the boys and also of the girls report that they draw books from the public library. A number of others report having done so before dropping out of school.

As shown in Table 42, there has been a good deal of drifting about by employed brothers and sisters. Only 32, or 19.8 per cent, have held one position only, while nearly one-half of the total number have held three or more positions. Two boys report eight different positions each.

TABLE 42.—*Number of positions held by employed brothers and sisters since leaving school.*

Number of positions held.	Boys.	Girls.	Total.
1 position	17	15	32
2 positions	25	14	39
3 positions	28	14	42
4 positions	14	3	17
5 positions	10	.....	10
6 positions	3	1	4
7 positions	1	.....	1
8 positions	2	.....	2
Not reported	7	7	14
Total	107	54	161

One boy honestly confesses that he has never had a steady job, while the records of many others show the same condition. A number of boys report apprenticeships as their first positions, but after the first few weeks, or months at the most, they leave this work and take jobs entirely different in character.

In Table 43 the positions held at the time of making the reports are classified by groups as used by the Census Bureau. The group numbers as used by the bureau are retained and used in Tables 44–48 also. One-half of both the boys and the girls are holding jobs in the manufacturing and mechanical industries. Clerical positions come next. It is instructive to note that while quite a large number have taken commercial and business courses since leaving school the majority are engaged in industrial pursuits and a considerably less number are in clerical positions.

TABLE 43.—*Occupation distribution of employed brothers and sisters.*

Group number.	Occupation	Number persons reporting.		
		Boys.	Girls.	Total.
3	Manufacturing and mechanical industries	47	27	74
4	Transportation	5	1	6
5	Trades	16	4	20
7	Professional	5	1	6
8	Domestic and personal	1	7	8
9	Clerical	25	7	32
	Not reported	8	7	15
	Total	107	54	161

Tables 44 to 48, inclusive, were prepared to show in detail the school and work records of these 161 boys and girls who left school to go to work. The numerals under "nature of work" in positions held refer to the Census Bureau groups, e. g., "3" refers to the "manufacturing and mechanical industries" group.

In cases in which more than one position has been held of a different nature in the same group, the letters of the alphabet, *a*, *b*, *c*, etc., are used to signify different *kinds* of work; e. g., "*a*," even if used several times, signifies the same kind of work, although it may be repeated to show a number of different jobs.

In one instance a boy (No. 15 in Table 48) has held eight different jobs during the five years he has been out of school. These jobs are each of a different nature and in five different occupational groups. This boy had completed three years of high-school work. His last and present job, at 20 years of age, was only that of laborer in a powder mill.

This boy seemed to have some ambition, but experienced difficulty in finding himself. A Canadian by birth, he dropped out of the Wilmington high school while a senior. He had pursued, since that time, a correspondence course in "telephone engineering" and a night-school course in Spanish at the Young Men's Christian Association. Also he was taking books from the public library.

Table 44.—*Records of boys and girls who have held only one job since leaving school.*

Number.	School history.[1]			Working history.	
	Age when left school.	Grade completed.	Years since leaving school.	Months worked at the job.	Nature of work.[2]
BOY.					
1	15	8	1	12	9, office boy.
2	14	6	.....	.....	3, folder.
3	15	II	½	6	9, office assistant.
4	14	5	5	24	3, apprentice.
5	15	4	1	6	3, heating rivets.
6	14	6	4	48	3, shoemaker.
7	16	8	1	4	9, stenographer.
8	12	5	4	30	3, rivet heater.
9	13	5	3	36	5, clerk and driver.
10	14	7	1	6	5, errand boy.
11	17	H. S.	2	6	5, advertising solicitor.
12	15	8	1	12	3, pattern maker.
13	15	8	1	12	5, serving milk.
14	16	8	3	36	9, shipping clerk.
15	14	5	1	4	5, errand boy in grocery.
16	17	I	3	39	7, drafting.
17	14	6	2	9	3, apprentice.
GIRL.					
1	16	7	1	12	5, saleslady.
2	14	III	3	30	3, packer in bake shop
3	13	6	6	6	3, knitter hosiery.
4	14	6	3	3	3, machinery operator bottle works.
5	14	7	2	6	3, glazier leather works.
6	14	3	6	24	3, skin painter.
7	15	8	1	½	9, cashier.
8	18	II	2	24	3, cigar packer.
9	14	8	6	1½	7, assistant optician.
10	16	7	1	18	8, housework.
11	14	.....	3	24	9, cashier in grocery.
12	15	6	2	1	3, work on hopper—rubber hose.
13	13	.....	2	9	3, operator sewing machine.
14	14	.....	2	16	3, silk weaver.
15	16	II	1	9	4, telephone operator.

[1] All these boys and girls attended the public schools except boy No. 1 and girls 3 and 11, who attended parochial schools, and girl 6, who attended a Russian school.
[2] For occupations indicated by the numerals in this column, see Table 43.

TABLE 45.—*Records of boys and girls who have held two jobs since leaving school.*

Number.	School history.[1]			Working history.			
	Age when left school.	Grade completed.	Years since leaving school.	Months worked at each job.		Nature of work.[2]	
				First.	Second.	First.	Second and present job.
BOY.							
1	16	H. S.	4	9	9	9	9, clerical.
2	14	7	2	3	12	9a	4b, telephone operator.
3	15	II	1	2	6	3a	3b, machinist.
4	15	7	4	3	8	9a	3b, helper, sheet-metal works.
5	14	8	1	4	4	9	9, clerical.
6	14	H. S.	6	48	24	9a	9b, collector.
7	16	8	4	12	36	9a	5b, salesman.
8	15	6	5	24	30	3a	3b, helper.
9	13	8	5	2	36	3a	3b, heater boy.
10	16	8	4	24	24	9a	7b, draftsman.
11	14	I	5	24	12	9a	9b, runs typewriter.
12	16	8	1	¾	4	3a	9b, office boy.
13	14	7	6	24	24	9a	4b, telegraph operator.
14	18	III	1	6	6	3a	3b, machine operator.
15	15	I	2	12	18	5a	3b, apprentice.
16	15	III	5	24	30	3a	9b, clerical.
17	15	8	5	48	24	3a	3b, plumber.
18	12	5	4	36	½	5a	5b, porter.
19	14	8	4	.....	.....	9a	9b, stenographer and clerk.
20	14	7	1	.....	.....	9a	3b, helper, machine shop.
21	17	6	3	24	12	3a	3b, apprentice plumber.
22	15	7	3	.....	.....	3a	9b, office clerk.
23	14	6	3	32	3	3a	3b, pipe-fitter helper.
24	15	II	4	30	12	9a	9b, bookkeeper.
25	14	7	1	4	6	5a	5b, filling orders.
GIRL.							
1	18	I	2	12	12	9a	9b, stenographer.
2	14	7	4	12	36	3a	3b, cigar packer.
3	14	6	5	12	6	3a	3b, inspector talking machines.
4	15	III	1	2	6	3a	3b, work in bleachery.
5	16	7	1	6	1	3a	3b, inspecting bottles.
6	15	8	1	9	¾	8a	8b, helper in laundry.
7	14	7	4	24	6	8a	8b, inspector in laundry.
8	19	IV	2	4	12	9	9, stenographer.
9	16	8	2	12	6	3a	3b, helper, rubber company.
10	14	6	3	6	3	5	5, saleslady.
11	14	5	4	7	2	8a	3b, quilling in silk mill.
12	14	8	6	24	6	3a	7b, chambermaid.
13	17	II	2	1	1	9a	9b, stenographer.
14	15	7	1	6	1	3a	3b, trimming.

[1] All these boys and girls attended the public schools except girl No. 10, who attended a parochial school.
[2] For occupations indicated by the numerals in these columns, see Table 43; the letters *a* and *b* signify different kinds of work.

TABLE 46.—*Records of boys and girls who have held three jobs since leaving school.*

Number.	School history.[1]			Working history.					
	Age when left school.	Grade completed.	Years since leaving school.	Months worked at each job.			Nature of work.[2]		
				First.	Second.	Third.	First.	Second.	Third and present job.
BOY.									
1	14	5	1	6	4	1	5a	3b	3c, oiling machinery.
2	14	6	5	18	12	.....	5a	5b	3c, machine fixer.
3	16	6	1	½	12	¾	3a	3b	3c, pattern maker.
4	14	7	3	7	12	6	9a	9a	9b, shipping clerk.
5	13	8	3	24	1	4	9a	9a	3b, apprentice.
6	13	6	5	18	24	6	9a	3b	3c, making hose.
7	17	III	3	12	12	9	3a	7b	7c, draftsman.
8	17	II	1	1/10	3	6	3a	9b	7c, reporter.
9	14	4	3	18	9	8	3a	3b	3c, machine operator.
10	14	6	4	27	3	3	3a	5b	5b, clerk in grocery.
11	14	7	3	16	12	8	3a	5b	5c, clerk in grocery.
12	14	7	1	3	4	4	5a	5a	3b, laborer.
13	14	4	3	.....	.....	12	4a	5b	3c, laborer.
14	15	6	1	½	½	1	4a	4a	3b, machine helper.
15	15	8	1	½	3	4	9a	3b	3c, apprentice.
16	13	7	2	2	3	1	9a	9b	9c, mail boy.
17	14	7	2	4	6	6	3a	3b	3c, pressman.
18	13	8	7	48	6	6	5a	5a	5a, selling papers.
19	14	7	4	24	4	6	9a	5b	9c, clerk.
20	15	7	1	8	4	4	7a	8b	7a, drafting.
21	17	4	1	.....	.....	.....	3a	3b	3c, running drill press.
22	15	7	5	24	24	6	3a	3b	3c, plumber's helper.
23	16	7	2	6	8	3	3a	3b	3a, plumber apprentice.
24	13	7	6	36	24	6	3a	3b	3c, assembling.
25	13	5	8	2	36	48	5a	5b	5c, shipping clerk.
26	17	III	1	2	3	3	9a	9b	9c, stenographer.
27	14	5	1	1	3	¾	3a	3b	3b, operator machine.
28	16	4	2	12	6	6	5a	4b	4c, telegraph operator.
GIRL.									
1	16	8	2	3	12	27	3a	9b	9c, salesgirl.
2	14	5	4	¾	6	1	5a	5a	3b, operating press.
3	14	5	1	6	½	¾	8a	3b	3c, folding cloth.
4	15	5	4	2	36	1½	3a	3b	3b, cigar maker.
5	14	6	4	15	12	18	8a	3b	3c, glazier.
6	14	5	2	12	6	6	5a	3b	3c, glazier.
7	13	4	7	24	12	6	3a	3a	3b, tobacco factory.
8	14	6	3	1½	6	12	3a	3b	5c, clerk.
9	12	6	5	24	4	32	3a	3b	3c, knitter.
10	16	6	1	.....	.....	2	8a	8b	8b, house work.
11	15	7	4	3	24	1	5a	3b	5c, house work.
12	15	8	5	8	12	1	8a	8a	8a, house work.
13	14	7	6	30	12	24	3a	3b	3c, textile worker.
14	16	6	1	2	1	3	8a	8a	8b, house work.

[1] All these boys and girls attended the public schools except boys 9 and 13 and girl 7, who attended parochial schools.

[2] For occupations indicated by the numerals in these columns, see Table 43; the letters *a*, *b*, *c* signify different kinds of work.

TABLE 47.—*Records of boys and girls who have held four jobs since leaving school.*

Number.	School history.[1]			Working history.							
	Age when left school.	Grade completed.	Years since leaving school.	Months worked at each job.				Nature of work.[2]			
				First.	Second.	Third.	Fourth.	First.	Second.	Third.	Fourth and present job.
BOY.											
1	14	II	7	6	2	48	24	4*a*	9*b*	3*c*	3*c*, compositor.
2	15	6	3	9	27	2	1	4*a*	3*b*	3*c*	3*c*, iron welding
3	14	8	3	6	6	15	6	3*a*	3*b*	3*a*	3*c*, helper to blacksmith.
4	14	.....	6	6	30	1	3	3*a*	3*b*	3*c*	3*d*, powder mill.
5	15	8	3	8	6	15	12	9*a*	9*b*	3*c*	3*d*, tinsmith.
6	13	6	7	18	15	36	12	3*a*	5*b*	5*c*	9*d*, agent for newspaper.
7	13	5	2	6	6	3	3	5*a*	3*b*	3*c*	3*d*, stamping leather.
8	15	7	2	6	(3)	12	6	5*a*	9*b*	9*c*	9*d*, clerk.
9	14	7	4	12	12	12	12	4*a*	3*b*	3*c*	4*d*, chauffeur.
10	13	6	2	12	1	6	6	4*a*	3*b*	4*c*	9*d*, office boy.
11	15	7	1	2	4	6	2	9*a*	9*b*	9*a*	9*b*, clerk.
12	15	4	1	.....	.....	.....	.....	.....	.....	.....	.....
13	15	III	4	12	12	12	9	9*a*	9*b*	9*c*	9*d*, bookkeeper.
14	13	6	5	36	12	6	2	5*a*	5*b*	8*c*	4*d*, chauffeur.
GIRL.											
1	15	7	2	2	6	12	6	3*a*	8*b*	3*c*	3*d*, glazier.
2	14	8	5	6	24	24	12	5*a*	5*b*	5*b*	3*c*, dressmaker.
3	14	6	6	15	9	15	.....	9*a*	9*a*	9*b*	9*c*, bookkeeper.

[1] All these boys and girls attended public schools except boys 3, 4, 7, and 12, and girl No. 1, who attended parochial schools.

[2] For occupations indicated by the numerals in these colums, see Table 43; the letters *a*, *b*, *c*, and *d* indicate different kinds of work.

[3] Four days.

TABLE 48.—*Records of boys and girls who have held more than four jobs since leaving school.*

Number.	School history.[1]			Working history.																
				Months worked at each job.								Nature of work.[2]								
	Age when left school.	Grade completed.	Years since leaving school.	First.	Second.	Third.	Fourth.	Fifth.	Sixth.	Seventh.	Eighth.	First.	Second.	Third.	Fourth.	Fifth.	Sixth.	Seventh.	Eighth.	Present job.
BOY.																				
1	15	6	4	27	3	6	4	12	...	...	...	5*a*	3*b*	3*c*	5*a*	5*a*	...	...	...	Huckster.
2	11	...	8	24	12	48	6	6	...	...	...	5*a*	3*b*	5*a*	5*c*	3*d*	...	...	...	Powder worker.
3	14	6	2	3	12	2	6	1	...	...	...	3*a*	9*b*	3*c*	8*d*	9*c*	...	...	...	Operator, adding machine.
4	14	6	4	6	1	2	18	12	...	...	...	9*a*	3*b*	3*c*	9*d*	9*c*	...	...	...	Delivery clerk.
5	14	7	5	12	...	...	12	36	...	...	...	5*a*	3*b*	5*c*	3*d*	5*c*	...	...	...	Milk business.
6	15	6	4	6	9	9	1	1	...	...	...	3*a*	3*b*	1*c*	3*d*	3*c*	...	...	...	Machinist apprentice.
7	15	7	4	18	6	6	3	9	...	...	...	8	8	8	8	8	...	...	...	Barber.
8	13	6	4	12	21	4	4	1	...	...	...	5*a*	3*b*	7*c*	3*d*	3*e*	...	...	...	Box tester.
9	13	6	3	18	6	2	6	3	...	...	...	5*a*	3*b*	5*c*	5*d*	5*e*	...	...	...	In meat shop.
10	14	6	5	3	6	12	6	1	...	...	...	5*a*	3*b*	7*c*	3*d*	3*d*	...	...	...	Plumber apprentice.
11	16	7	4	8	9	9	4	15	9	...	...	4*a*	9*b*	9*c*	9*d*	9*e*	9*d*	...	...	Stenographer.
12	14	4	5	36	6	1	6	4	1	...	...	3*a*	5*b*	3*c*	5*d*	3*e*	3*f*	...	...	Machine helper.
13	12	6	8	24	12	36	6	6	12	...	...	9*a*	9*a*	3*b*	3*c*	3*d*	3*c*	...	...	Weighing powder.
14	13	7	4	9	15	6	6	3	12	6	...	9*a*	9*b*	3*c*	5*d*	3*e*	5*f*	3*g*	...	Electrical apprentice.
15	15	III	5	1	4	6	18	2	9	4	2	7*a*	4*b*	9*c*	9*d*	5*e*	9*f*	3*g*	3*h*	Laborer, powder company.
16	13	1?	3	...	...	...	...	...	...	...	...	1*a*	1*a*	4*b*	4*b*	5*c*	4*b*	9*d*	5*c*	Serving papers.
GIRL.																				
1	14	4	6	24	15	...	12	3	6	...	...	8*a*	3*b*	3*c*	8*d*	3*e*	3*e*	...	...	Sizer, leather works.

[1] All these boys attended the public schools; the one girl attended a parochial school.
[2] For occupations in these columns, see Table 43; the letters *a*, *b*, *c*, etc., indicate different kinds of work.

SUMMARY OF FINDINGS.

1. Working permits of two general forms, the one for working outside of school hours, the second for working during school hours, are provided by the State law. With several notable weaknesses, these provisions of the law are reasonably satisfactory. The chief weakness in them is in the lack of sufficient means for their enforcement.

2. The granting of working permits being in the hands of the public school officials, little effort seems to be made in enforcing the provision in respect to colored children and to pupils who attend parochial schools. Facilities are not adequate for doing this. Full and sufficient reasons for going to work do not seem to be required of applicants for working permits. Notable failure to require children either to be in normal physical condition before permits are granted, although the law requires this, or to have made normal school progress is clearly shown. It is the poorly developed child physically and the

one who is over age in his school work that makes application for these permits.

3. The schools are not holding the boys and girls as they should. As soon as the law permits them to go to work they leave school, not because of urgent necessity in the majority of cases, but because they were behind in their studies and discouraged and preferred to go to work rather than to continue in work that promised no direct help in fitting them for earning a living.

4. The tables show that the employment-certificate children are not, on the whole, efficient in their "jobs" or willing to learn, as they change from job to job for a small increase in wage or for the mere novelty of a change. It would be better if the schools could give more practical work and hold them for such training as would fit them for positions of more promise for the future.

5. There is apparent in these frequent changes of "jobs" a lamentable lack of moral obligation on the part of the children. These conditions should be investigated further and, if possible, means found in the schools for remedying them.

CHAPTER V.

EDUCATIONAL NEEDS OF WORKERS, AND PRESENT EDUCATIONAL OPPORTUNITIES.

I. NEEDS EXPRESSED BY THE WORKERS.

From the individual schedules prepared by workers in a number of different occupations, suggestions were obtained as to what the schools might do to help them in their work. These suggestions are summarized in Tables 49, 50, and 51.

TABLE 49.—*Summary of suggestions of skilled workmen as to what the public schools should teach to help the workers in their occupations.*

Subjects suggested.	Number of workers offering suggestions.								
	Painters.	Linemen.	Plumbers.	Electricians.	Plasterers.	Machinists.	Carpenters.	Bricklayers.	Total.
Mathematics	2	1	1		1	3	2	2	12
Drawing	2					4	1	1	8
Reading and English	1	1	1			4			7
Blue-print reading	2			1			1		4
Estimating	1			1				1	3
Spelling	1	1	1						3
Electricity				2					2
Study of industries					2				2
Chemistry	1								1
Writing	1								1
Study of colors	1								1
Cleanliness	1								1
Courtesy	1								1
Rapid calculation	1								1
Present school system sufficient	1								1

TABLE 50.—*Summary of suggestions of the workers as to what a part-time school could teach a beginner in the study of trades.*

Subjects suggested.	Number of workers offering suggestions.					
	Painters.	Bricklayers.	Carpenters.	Electricians.	Machinists.	Total.
Drafting, general	1	1	1		3	6
Mathematics	2	1			3	6
Estimating	1	1		1	1	4
Chemistry	2					2
Drawing, architectural		2				2
How to superintend, etc.	1			1		2
Reading and English	1				1	2
Blue-print reading	1					1
Courtesy	1					1
Construction		1				1
Drawing, machine					1	1
Generators, operation of			1			1
Mixing colors	1					1
Electricity				1		1
Study of plans	1					1
Spelling	1					1

TABLE 51.—*Summary of suggestions of the workers as to evening-school courses for employed workers.*

Subjects suggested.	Number of workers offering suggestions.							
	Painters.	Plumbers.	Electricians.	Linemen.	Carpenters.	Bricklayers.	Machinists.	Total.
Drawing	2		1		2	1	3	9
Estimating	2		1		1	1		5
English and reading					1		2	3
Arithmetic							2	2
Mathematics		1			1			2
Blue-print reading	1							1
Common-school education			1					1
Chemistry							1	1
Shopwork in industries				1				1
Engineering (mechanical)						1		1
Engines (steam)							1	1
Monogram lettering	1							1
Mixing colors	1							1
Sanitation	1							1
Steel square, study of					1			1
Strength of material					1			1
Styles of brick work						1		1
Measuring	1							1

These suggestions refer to three classes of schools, (*a*) courses to be offered in the regular schools to assist boys and girls to choose and to prepare for chosen occupations before they leave school; (*b*) courses in part-time schools to help apprentices while they are learning their trades; (*c*) courses in evening schools to help employed workers.

These suggestions are especially valuable as representing the real needs felt by the workers. The suggestions are classified according to the kinds of courses needed and the trades of the men making the suggestions. More drill in the common branches is desired for the boy before he leaves school and after he begins working at his trade both as apprentice and journeyman. Drafting and blueprint and plan reading are demanded by a large number of the workers. Many other courses are suggested. Sanitation, cleanliness, and courtesy are suggested by several. A study of the industries and practical shopwork along a number of lines are suggested.

Nearly one-half of these same workers report efforts to continue their education since going to work. Night school, business college, and correspondence school courses have been taken by them. More than one-half of them left school by the time they were 15 years of age or before. The younger workers, whose reports are recorded in chapter 4, show efforts to continue their education along similar lines.

The groups of workers representing the metal working, building and printing trades examined the findings of the Richmond (Va.) survey as they referred to the educational needs of the workmen in the groups of trades represented. These men indorsed the findings of the Richmond report, the representatives of the building trades placing even stronger emphasis on the importance of a knowledge

of drawing and blueprint reading in these trades. For further details the reader is referred to Bulletin 162, United States Bureau of Labor Statistics.

II. EDUCATIONAL NEEDS AS EXPRESSED BY EMPLOYERS.

The suggestions of employers as to the educational needs of their employees are summarized in tables 52, 53, and 54. The employers reporting consider the greatest need to be a thorough grounding in the common-school branches before boys and girls are allowed to leave school. The need of more thorough work in English and arithmetic is especially emphasized. Drawing and manual training of a practical kind are considered important.

TABLE 52.—*Summary of suggestions of employers as to what the public schools should teach to help prospective workers.*

Subjects suggested.	Number of employers reporting.						
	Metal-working industries.	Building trades.	Printing trades.	Leather industries.	Textile industries.	Transportation companies.	Total.
Number of employers reporting	15	8	2	1	1	1	28
Common-school branches	9	3	2	1	1	1	17
Mathematics	5	4				1	10
Drawing	4	3				1	8
Manual training	3	1					4
Study of industries	1	1					2
Mechanics	1	1					2
Foundry practice	1						1
Blueprint reading		1					1
Physics		1					1
Punctuation			1				1
Chemistry					1		1

TABLE 53.—*Summary of suggestions of employers as to what an apprentice could study to become more efficient.*

Subjects suggested.	Number of employers reporting.						
	Metal-working industries.	Building trades.	Printing trades.	Leather industries.	Textile industries.	Transportation companies.	Total.
Number of employers reporting	12	5	2	1	1	1	22
Mathematics	4	2				1	7
Drawing	5	1				1	7
Common branches (review of)	4	1		1	1		7
English			1	1		1	3
Study of industries	1	2					3
Study of materials	1	2					3
Spelling		1	1				2
Chemistry					1		1
Advertising			1				1
Physics		1					1
Mechanics	1						1
Economics (practical)	1						1

TABLE 54.—*Summary of suggestions of employers as to evening school courses for employed workers.*

Subjects suggested.	Number of employers reporting.					
	Metal-working industries.	Printing trades.	Leather industries.	Textile industries.	Transportation companies.	Total.
Number of employers reporting	12	2	1	1	1	17
Drafting	5				1	6
Mathematics	4			1	1	6
Trade efficiency	4					4
English	1	1	1		1	4
Value of time	2	1				3
General shop practice	2					2
Common-school branches			1	1		2
Study of industries	1					1
Mechanics	1					1
Color schemes		1				1
Advertising		1				1
Chemistry				1		1

The need for part-time education is expressed by almost all of the manufacturers who reported. They suggest for their apprentices courses similar to those recommended for prospective workers. Sufficient knowledge of the common branches is often lacking. Every manufacturer reported that he preferred an apprentice who had had some high-school work. A large majority of these men, especially those representing the metal-working industries, expressed themselves as in favor of cooperative courses, their plants working with the high school.

As to the needs of the journeyman workers, employers favored instruction which will give them a better appreciation of their work, the value of time, and so on. Further instruction in drawing and mathematics was advocated also.

III. PRESENT PROVISIONS FOR INDUSTRIAL EDUCATION.

1. IN THE SCHOOLS.

Public schools.—Under the titles of free-hand and mechanical drawing, domestic art and science, and manual training, considerable work is being done in the Wilmington public schools.

In October, 1889, manual training was introduced into the high school. This, with drawing, both free-hand and mechanical, and domestic science, are required of all high-school pupils in their first and second years, as noted in the high-school courses outlined earlier in this report.[1]

The free-hand drawing and sewing courses are well organized in the grades in both primary and grammar schools. Comparatively little has been done in manual training in the grades.

Table 55 gives the general arrangement as to time allotment and subjects in the different grades of these courses.

[1] See Chapter II, p. 22.

TABLE 55.—*General arrangement of the industrial arts and household arts courses in the Wilmington public schools.*

Grades.	Time per week.	Free-hand drawing.	Time per week.	Mechanical drawing.	Time per week.	Industrial arts.	Time per week.	Household arts.
1	Three 20-minute periods.	*Boys and Girls.* General art work						
2	Three 20-minute periods.	*Boys and Girls.* General art work						
3	Three 20-minute periods.	*Boys and Girls.* General art work						
4	Two 30-minute periods.	*Boys and Girls.* General art work			One 60-minute period.	Cardboard	One 60-minute period.	Sewing.
5	Two 30-minute periods.	*Boys and Girls.* General art work			One 60-minute period.	Cardboard	One 60-minute period.	Sewing.
6	Two 30-minute periods.	*Girls.* General art work	Two 30-minute periods.	*Boys.* Drawing of rectangular solids.	One 60-minute period.	Simple woodwork	One 60-minute period.	Sewing.
7	Two 45-minute periods.	*Girls.* General art work	Two 45-minute periods.	*Boys.* Drawings of simple objects.	One 60-minute period.	Bench woodwork	One 60-minute period.	Sewing.
8	Two 45-minute periods.	*Girls.* General art work	Two 45-minute periods.	*Boys.* Drawings of simple objects.	One 60-minute period, 8B; 90-minute period, 8A.	Bench woodwork	One 60-minute period, 8B; 90-minute period, 8A.	Sewing.
I	One 90-minute period per week.	*Girls.* General drawing, design, and a little crafts work in leather and metal.	One 90-minute period per week.	*Boys.* Use of instrument; lettering; geometry problems; projections.	Two 90-minute periods per week.	*Boys.* First semester, joinery, three-fourths time; turning, one-fourth time; second semester, vise and sheet metal work.	Two 90-minute periods per week.	*Girls.* Cookery.
II		*Girls.* General drawing, design, and a little crafts work in leather and metal.	One 90-minute period per week.	*Boys.* Working drawings; projections: architectural drawing.	Two 90-minute periods per week.	*Boys.* First semester, pattern making, cabinet making; second semester, machine-tool work.	Two 90-minute periods per week.	*Girls.* Cookery.

TABLE 56.—*Teaching and supervision of industrial arts and household arts courses—white schools.*

Subjects.	Grades.	Teacher.	Supervisor.
Freehand drawing and general work.	1 to 5 (primary school).	Regular grade teachers (women).	Art supervisor (woman)
	6 to 8 (grammar school).	Special art teacher (woman in each of the grammar schools).	Art supervisor
	High school, first and second years.	Taught by art supervisor.....	Do.
Mechanical drawing.	6 to 8.....	In two schools by art teacher. In one school by teacher of industrial arts (woman). In one school by teacher of industrial arts (man).	A little supervision given by high-school teacher of mechanical drawing.
	High school, first and second years.	Mechanical drawing teacher (one man).	
Industrial arts.....	4 and 5.....	Regular grade teachers.....	A little supervision given by art supervisor.
	6 to 8.....	In two schools art and construction taught by same teacher (one woman in each). In two schools mechanical drawing and construction taught by same teacher (one woman in one school; one man in one school).	A little supervision given by high-school teacher of woodworking. (No real supervision in either grades or high school.)
	I, II.....	Woodworking courses by one man. Metal-working courses by one man.	
Household arts.....	4 and 5.....	Regular grade teachers.....	Sewing supervisor.
	6 to 8.....	Special teachers of sewing (one woman) in each of the four schools.	Do.
	I, II.....	Special teacher of cookery (one woman).	

In Table 56 an outline of the teaching facilities is shown. Previous to the school year 1915–16 the school system had a supervisor of drawing and manual training combined. During 1916–17 there was a separate drawing supervisor but no regular manual-training supervisor.

In the colored schools the work is arranged very much as for the white schools. Mechanical drawing begins in the eighth grade. Woodworking begins in the sixth year with simple problems and continues through the fourth year of the high school, concluding with furniture construction, wood turning, and pattern making. Sewing is given to upper-grade and high-school girls, and cookery to high-school girls.

The girls of the teachers' training school are given instruction throughout their two-year course in drawing, sewing, and simple handwork. The courses are taught by the art and sewing supervisors.

The data for this part of the report were obtained from conferences with the superintendent of schools, supervisors and teachers, visits to the several schools and classes, and detailed study of courses of study, outlines and samples of work submitted by supervisors and teachers.

In 1914 the board of education published a very complete and well prepared bulletin outlining in considerable detail the courses in drawing, both freehand and mechanical, and manual training.

THE ELEMENTARY SCHOOLS.

The courses in freehand drawing.

The work in freehand drawing is probably best explained by several direct quotations from the bulletin mentioned. The course is outlined in detail by the supervisor for the use of the teachers. The work for the first week in September for the first grade is as follows:

1. Practice drawing straight lines in various positions, also squares, oblongs, triangles, etc. Associate objects of interest with these lines. Aim: To develop free movement, observation. Materials: Manila drawing paper, 6 by 9 inches, crayola or pencil.

2. Cut from magazines, catalogues, and advertisements all straight-line objects. Aim: To develop observation of outline, motor forces. Material: Any available material, scissors.

3. Draw at the blackboard straight lines and plane figures in various positions. Children to work with the teacher. Aim: Free movement. Material: Dustless crayon to be used at all blackboard lessons.

4. Free cutting from plane figures, as the square, the oblong, the triangle; children to work from large mounted figures which are to be placed at the front of the room. Attempt one straight-line object. Aim: To memorize shapes. Material: Tinted folding or construction paper.

5. Paste the figures cut at the last lesson on a strip of construction paper of a suitable color to form a border. Aim: Harmony of color, neatness. Material: Figures, construction paper, paste.

At the end of the first year the following results should be apparent:

1. Ability to name and recognize the six standard colors.
2. Ability to represent straight and curved lines in various positions, as standing, lying down, leaning.
3. Ability to represent general forms of objects by drawings and cutting.
4. Knowledge of the use of straight edge and 1-inch measurement.
5. Ability to trace, cut, and paste neatly.
6. Familiarity with simple nature studies, trees, leaves, flowers, etc.
7. Ability to understand such terms as right, left, upper, lower, edge, corner, straight, curved, center.
8. Ability to construct the simple objects designed for this grade through teacher's directions.

The work for each grade is outlined in a similar manner. At the end of the sixth year the following results are expected:

1. Ability to express light and shade through pencil, painting, showing kind of surfaces, solidity, etc.
2. Familiarity with all tints and shades made from the standard colors.
3. Ability to render nature studies, simple still-life groups, flat and graded washes with the brush.
4. Some knowledge of good decoration. Proper framing and hanging of pictures.
5. Familiarity with all terms used in "results of the fifth year," and, in addition, a knowledge of the simplest principles of perspective.

A general outline in drawing and handwork for the seventh and eighth grades includes the following:

1. Nature study: Various mediums, outlines, light and shade, color. Aim: Close observation of details, good technique.
2. Object drawing, various mediums.
3. Still life. Aim: True proportion, light and shade, color.
4. Map drawing: Pencil and water color. Aim: To correlate with history and geography.
5. Perspective studies: Elementary principles. Aim: To acquire a knowledge of the convergence of lines.
6. Color harmony: Its application to interior decoration, wearing apparel. Aim: To develop good taste.
7. Home work: Original problems based on decoration. Outdoor sketching.
8. Study of pictures and frames: Lessons in hanging and arrangement. Fitness of certain objects to given spaces.
9. Elementary bookbinding: Simple notebook problems. Aim: Accuracy, neatness.
10. Elementary design: Constructive and applied units from conventionalized nature studies; stencil construction; stencil application in various objects of use.

At the end of the seventh and eighth years the following results should be apparent:

1. Ability to draw common objects in perspective. Single objects or groups.
2. Power to represent solidity of objects by expressing light and shade.
3. A thorough knowledge of the mixing of all colors previously studied. Ability to represent various washes.
4. Use of the $\frac{1}{16}$-inch measurement.
5. Familiarity with all type solids. Ability to draw these from memory or from the objects themselves.
6. Power to appreciate the general laws of good taste and a regard for the fitness of things.
7. Ability to express in careful technic various nature forms, showing close observation of growth and structure.
8. Ability to construct simple products of use.

The entire work of these grades is closely connected with the high-school courses.

The outlines given above illustrate the nature of the freehand-drawing work. There are many admirable qualities in the course, but on the whole it seems too formal. It is not sufficiently related to the life and experiences of the children. Considerable correlation with holidays, special days, and seasons is introduced, which is appropriate. Some good suggestions as to correlation with other subjects of the curriculum are made. Attention is appropriately called to the framing of pictures, division of wall spaces, etc. More material of this nature, as well as the relation of color to dress, home decorations, etc., could be introduced appropriately; also more correlation with the sewing and manual training. On the whole it would seem that too much is expected of the children in the time at their disposal and according to their age and ability.

Course in mechanical drawing.

Sixth grade.

The subject is introduced at this juncture in order that the boys of the higher grades and of the high schools may be able better to interpret advanced problems. The plates contain only the simplest working drawings and endeavor to acquaint the pupils with the two important views of any mechanical drawing, namely, the plan and the elevation. The various type solids are used as a basis for the more practical problems. Thorough drill on the use of the drawing board, T-square, triangles, and the compass is most important, as well as constant practice in freehand lettering. Twenty-four plates are designed for use in each of the grammar grades, and teachers will be supplied with a full set of 72 blue prints.

Series 1.

Plate I. Freehand lettering.
II. Conventional lines and their uses.
III. Cube.
IV. Square prism.
V. Equilateral triangular prism.
VI. Square pyramid—elevation showing one face.
VII. Square pyramid—elevation showing two faces.
VIII. Cylinder.
IX. Cone.
X. Hexagonal prism.
XI. Nail box.
XII. Geometric problems.

Series 2.

Plate I. Square plinth.
II. Square washer. Round hole.
III. Circular plinth.
IV. Circular washer. Square hole.
V. Rectangular prism.
VI. Section of a brick chimney.
VII. Cement vat.
VIII. Wrought-iron brace.
IX. Water-pipe section.
X. Circular lamp shade.
XI. Standard or pedestal.
XII. L-shaped block -bored.

Seventh grade.

Series 3.

Plate I. Triangular plinth.
II Triangular brass tray.
III. Hexagonal pyramid.
IV. Hexagonal lamp shade.
V. Footstool.
VI. Mail box.
VII. Shelf.
VIII. Stone steps.
IX. Octagonal plinth.
X. Octagonal nut.
XI. Teapot stand.
XII. Bookrack.

Series 4.

Plate I. Window plant box.
II. Candlestick.
III. Hourglass.
IV. Pail.
V. Hemisphere.
VI. Bowl.
VII. Drawing board.
VIII. Table.
IX. T-square.
X. Triangle.
XI. Tool box.
XII. Cup and saucer.

Eighth grade.

Series 5.

Plate I. Square stand.
II. Piano bench.
III. Bookshelves.
IV. Desk.
V. Kitchen table.
VI. Taboret.
VII. Ice chest.
VIII. Picture frame.
IX. Iron ring.
X. Inkstand.
XI. Sleeve board.
XII. Toothbrush holder.

Eighth grade—Continued.

Series 6.

Plate I. Whisk-broom case.
II. Stovepipe elbow.
III. Bracket.
IV. Stone plant box.
V. Plan of schoolroom floor.
VI. Octagonal pyramid.
VII. Octagonal lamp shade.
VIII. Jar with stopper.
IX. Car wheel.
X. Car-rail section.
XI. Potato masher.
XII. Pulley.

No inking is done in the grades. The only equipment is an "eagle" compass and a foot rule.

Like many other courses in mechanical drawing this course is largely a copying of blue prints, with very little apparent connection with the construction work of the shops. As a formal course, logically developed, the course is much better than the average. But with only "an eagle compass and a foot rule," it can not be carried out successfully.

"Freehand lettering, conventional lines, and geometrical problems" mean very little to the boys when presented in a formal way. These things will have meaning only when taken up as required in the execution of drawings.

The planning and making of constructive designs for the articles to be made in manual training would give more real meaning to this course. Some drawings might profitably be from objects instead of all from blue prints. The "plan of the schoolroom" is a good problem and could be supplemented with drawings of the school building, yard, etc.

Courses in manual training.

In the fourth and fifth years cardboard work is carried on. If articles in these courses are designed by the pupils, working plans made, and care is taken to select projects for which the pupils have a real need and in which there is opportunity for some decoration in the drawing classes, this work may be made quite profitable. It represents an important industry and one of some local importance.

Two of the grammar schools are fairly well equipped for woodworking, although the teaching of this subject below the high school has not been carried far. A list of the problems in woodworking prepared for use in two of the grammar schools is given below. The articles are constructed from blue prints, and all boys are expected

to make the same articles. They are the conventional woodworking models as found in most schools.

As suggested in connection with the cardboard work, if articles really needed by the boys were planned and designed by them, and constructed from their own dimensioned drawings, this work will prove more interesting and much more profitable.

Problems in woodwork for grammar schools No. 24 and No. 28.

1. Use of rule, square, and knife. 2. Sawing to line and paring. 3. Sandpaper block. 4. Spool holder. 5. Teapot stand. 6. Keyboard. 7. Sleeve board. 8. Bench hook. 9. Shelf. 10. Whisk-broom holder. 11. Knife box. 12. Bird house. 13. Glove box.

Courses in sewing.

No sewing is given in the white high school, but it is given in the colored high school. However, in the white graded schools it is given in grades four to eight, inclusive. The supervisor of sewing directs all of the work in the schools, but teaches the classes in the teacher-training school only. Sewing is given in both years of this course.

Formerly there were eight special teachers of sewing. Now only two special teachers of sewing, besides the supervisor, are employed. The rest of the teaching is done by the regular grade teachers, who have been taught this special work by the sewing supervisor. The supervisor meets the grade teachers in groups composed of all of the teachers of the same grades in the city after school hours about twice each semester, and gives them instruction; the teachers working out in miniature the problems which they are to present to their pupils.

The supervisor also has the training-school girls make small-size models of the articles to be made by the pupils. These training-school students are well grounded in the principles of sewing, but unfortunately for this work they usually start to teach in the city school system in the lower primary grades where sewing is not taught. The upper-grade teachers who teach the sewing, as a rule, come from other cities and have not had instruction in the subject. None of those who are teaching sewing in the schools now have had any special instruction in the subject except that given by the present sewing supervisor, who has been in charge of this work for several years.

In the grade schools the usual method of procedure is to put two grades together—one teacher taking all of the girls of the two grades in sewing, and the other teacher the boys in some form of construction work.

The work done by the grade girls is practical in its nature. In each grade, in the first few lessons, three or four practice stitches are made; then these are applied in the making of full-sized garments.

The sixth grade girls make uniforms to wear in the high-school cookery. These seem to fit well into the course at this time, but it would seem more appropriate to make them nearer the time when they will be used.

The girls in the sewing classes seemed interested, and on the whole were doing good work. More correlation with the work in drawing in making of designs would increase the value of the instruction. In some instances not enough attention seemed to be given to having the girls design articles to their own measures or those for which they had a real need. The work in sewing was of better quality and of a more practical nature than is often found in a city school system.

The task of training the teachers for all the work in the subject carried on in the entire school system in addition to other responsibilities is too great for one supervisor. More specially trained teachers should be employed, particularly in each of the large grammar schools.

Some work with textiles, weaving, and other processes, should be introduced to relieve the monotony of five full years of regular sewing. Cookery should be introduced in the eighth grade at the latest.

HIGH SCHOOLS.

Courses in drawing and design.

Although the bulletin referred to above outlines four years of high-school work in "design and handicraft," it appears that only the first two years of the course are being given.

The outline of the work of these two years is as follows:

FIRST YEAR.

Object drawing: Pencil outline, accenting; pencil painting, light and shade; charcoal and chalk; charcoal and water color.

Figure drawing: Pencil outline, accenting; pencil painting, light and shade; silhouette studies.

Nature study: Pencil outline and mass drawing; brush work, neutral values; water-color rendering.

Outdoor sketching in pencil.

Composition.

Elementary principles of design.

Color harmony.

Elementary principles of perspective.

History of painting—illustrated notebooks.

Interior decoration of home and school—illustrated notebooks.

SECOND YEAR.

Nature study: Pencil, ink, color.

Design: Constructive and applied.

Stenciling: Stencil making, application on fabrics.

Art needlework: Suggestions—table runners, doilies, curtains, pillow covers.
Elementary bookbinding: Construction, using vellum. Suggestions—portfolios, notebooks, stationery cases.
History of painting—illustrated notebooks.
Interior decoration of home and school—illustrated notebooks. Personal adornment.

Similar work is outlined for the third and fourth years of the high-school course, but is not now offered.

The course is a strong one, and evidences of considerable interest on the part of the girls in the high school were apparent. The art work is correlated with the work in home economics. When the sewing courses are introduced in the high school (as now anticipated), further opportunity for correlation will be afforded.

Courses in mechanical drawing.

Although the bulletin states that "problems in this department are arranged in conjunction with the shopwork," little evidence of correlation was found in practice. The bulletin further states that "the aim of the work is to correlate the drafting with local industries. Research is encouraged along this line, and the department of English assists by assigning themes in the various processes of manufacturing."

A brief outline of the two years' course is as follows:

FIRST YEAR.

Use of instruments: Straight and curved lines, circles, concentrics, angles, etc.
Lettering: Freehand, designing, and spacing of titles, figures.
Geometric problems: Construction of various figures.
Projections: Simple objects based on the type solids, names and positions of views.

SECOND YEAR.

Working drawings: Application of the principles studied the first year, constructive work in detail and assembled shop projects, work relating to local industries.
Orthographic projection: Relation of planes, frustrums, use of lines and planes.
Architecture: House framing, details of construction, floor plans, elevations, simple perspectives, interiors, bungalow plans (original).

Some exceptionally good work is being done in this department. The teacher is a practical draftsman, a practicing architect, and has supervised the construction of buildings. One and one-half hours per week for two years is too short a time in which to develop the course as it has been planned. The problems for the woodworking and metal working courses could probably be designed and the working drawings made here.

The substitution of some of this correlated shop drawing in place of the more formal work of the first part of the drawing course, bringing in the use of instruments, lettering, and geometric problems only as needed would add to the educative value of the course. Likewise the theory of projection should follow rather than precede the application of these principles, and in architecture the course should start with the drawing of home plans and elevations, allowing the details of construction to follow as needed in completing the plans.

Courses in home economics.

All girls in the high school are required to devote two 90-minute periods each week to work in this department during the first and second years. It is seldom that work so well organized and so practical in character is found in a high-school course. The cookery and other features of the course are closely correlated with the cafeteria luncheon service of the school. The woman in charge of the luncheon service and the cookery teacher work together in planning the activities of each day, so that the products of the cooking classes are used as a part of the luncheon menu. The supplies for the cooking classes are furnished out of the receipts of the luncheon service. Each day the high-school girls provide one or more dishes for this service. Therefore, if the cookery lesson is on bread making, the girls can make bread in large quantities and loaves of regulation size. In this way the work is more practical than that frequently found in cookery courses, and is very economical for the school system.

When the new high-school building is completed, opportunity for further expansion of this department will be possible. As brought out in Table 12, almost all of the girls like the work.

Shop courses in wood and metal.

As already indicated, shopwork in the high school is of long standing. Bench woodworking was introduced in 1889, machine-shop work two years later, and forging three or four years later.

Five or six years ago the forge equipment was sold, and this part of the shopwork was discontinued. This equipment was thoroughly up-to-date in every respect, consisting of 24 down-draft forges and other equipment in proportion. There was a good room for the purpose, which is now used by the carpenter and painter for repair work. The teacher who had charge of the forging was old and hard of hearing, and he had considerable trouble with the boys. It is extremely unfortunate that this work was done away with, as it represents an industry of great importance in Wilmington and is a valuable manual-training subject.

The three shops were well equipped when installed, but have had very little additional equipment in 20 years. But this does not mean that the two shops now in use (woodworking and machine shops) are not in good condition. They are more completely equipped, and with better tools and machinery than many more modern shops. In almost every respect these shops are fully equipped for excellent work in their respective lines.

Formerly each boy had 90 minutes per day for manual training, but as the size of the school increased this time was cut down, until now each receives instruction but two double periods per week.

There is no correlation at present between the shop courses and the courses in design and mechanical drawing, although all instructors concerned expressed a wish that there might be such correlation. The time element was given as one reason why correlation is not attempted.

All shopwork is based on blue prints provided by the instructors, and all boys seemed to be doing the same work to a large degree. Although the courses as printed include "talks on the various kinds of wood, lumbering, iron and steel, processes involved in the manufacture of metals, shop systems, and local industries," the instructors reported that there is little or no time for these things. The courses are "shopwork" only. The interest of the boys in their work was good, and the technic and the products turned out were as a rule good. Some exceptionally good pieces of work were seen.

Some boys were repeating courses, and naturally were little interested in what they were doing. An instructor is authority for the statement that promotion in the high school is by years and not by subjects; consequently, if a boy fails in some academic subject, he is required to take his manual-training work over also, even if he had done this work creditably. If this administrative procedure must continue, it should at least be possible to provide new problems for boys repeating a course.

The boys pay for all material used in projects which they take home with them. Little of the purely exercise work is taken, but most of the articles of real value are.

In the construction of some projects little is left for the boy to do but to follow the directions given. Not much thought is required. For example, in lathe lesson No. 1, which is turning a taper piece, the boy is given a full-size blue print of the piece both in the cylinder form and as it appears when finished. Also he is given the following printed notes:

First. Make piece required length, facing ends straight and smooth, using side tool.

Second. Turn to diameter given in upper view of drawing, using diamond-point tool.

Third. Mark on surface for chambered section, and turn to given diameter plus a finishing cut. With parting-tool make chambered part required length, leaving enough metal for fillets. Finish ½ inch part, fillets, and ⅞ inch parts. Round over end, using the graver, and file finished parts.

Fourth. Find difference between large and small diameter of tapering part, and move tail-stock center toward front of lathe, one-half of this difference, for each number of times the length of tapering part is contained in length of piece. Turn, finish, and file to size.

In both shops the instructors are men of maturity who have had considerable practical experience in their respective trades. Thus they are exceptionally well adapted to continuing their work along more vocational lines.

The courses as outlined are as follows:

WOODWORK.

A. Joinery: Halved corner, through lap, miter joint, open mortise-and-tenon, butt mortise-and-tenon, dovetail, drawer dovetail, application of all joints in construction work. (It is impossible for each boy to make application of every joint. As a rule each boy constructs only one piece of work, making application of only one or two of these joints.)

B. Turning: Cylinder, step cylinder, grooved cylinder, bead and fillets. stocking darner, rolling pin, potato masher, mallet, gavel, candlestick, cup. (As a rule only one or two practice exercises are made. Some excellent practical projects are worked out.)

C. Pattern making: Washer, wrench, pipe connection, engine crank, stuffing-box gland, brass nut, pipe-connection elbow, eccentric strap. (Some of the more capable boys make more difficult problems, as patterns for small engine, etc.).

D. Cabinet making: Taboret, bookcase, table, desk, chair. (One or two articles made by each boy.)

METAL WORK.

A. Vise and sheet-metal work: Cutting, filing, straight and curved-line figures; riveting, cake lifter; application of cutting and filing; garden trowel; cast-iron paper file base, steel wire stem; drilling, draw filing, polishing, steel hammer head; punching, garden weeder; tap and die work, spool holder; chipping and filing, cast-iron hammer head, paper weight; brass paper weight.

B. Machine-tool work: Wrought iron cylinder; taper cylinder, chambered with fillet; cylinder chambered to gauge and cut to fit reamed hole; right and left hand threading, cast iron, United States standard; cast-iron lathe carriage handle. finished bright; hexagonal bolt and nut, finished all over; double taper, with beads and fillets; arbor with nut, square threads; crosshead, cast iron, finished bright; mandrel. (Not all of this course can be completed in the time available.)

CONTINUATION SCHOOLS.

There is no continuation school work done in the city.

PUBLIC EVENING SCHOOLS.

The only evening courses offered by the public schools are those already referred to, including classes in the review of the common-

school branches, and the Americanization school for foreigners, recently established. None of these courses is industrial in character, though the students are largely industrial workers.

PRIVATE SCHOOLS.

1. In some of the parochial schools some attention is given to free-hand and mechanical drawing.

In the prospectus of the "Salesianum," a private preparatory school for boys under the direction of the Catholic Church, free-hand drawing is given as one of the subjects taught in the "preparatory class," and free-hand and mechanical drawing, architecture, industrial drawing, and land measuring are mentioned as among the subjects required during the four years of the "commercial division" of the regular course.

In a large Friends' school giving instruction throughout all of the grades and a four-year high school, free-hand and mechanical drawing are given considerable attention. The primary school studies "include drawing, with work in form and color." The work in drawing of the grammar grades is described in the catalogue of the school as being "under the care of a skilled instructor of long experience, who has entire charge of the drawing throughout the school." The aim of the free-hand work is—

> to develop an appreciation of art, and to cultivate the taste for beauty in daily life and surroundings. The idea is to help the pupil at the very outset to originate a beautiful arrangement and to see the beauty of line and color which should exist in everything that is made by hand. The mediums used, whether pencil, charcoal, pen and ink, water-color, or pastel, are selected to suit the work to be done. The drawing room is well equipped with type forms, casts, and such materials as are helpful in art education.

The mechanical drawing course embraces perspective, plane geometry, and plane projection.

Courses in hand work, such as free cutting, paper construction work, weaving, clay work, and sand table work, are given in the primary grades of this school.

In the first and second years of the high-school course, which is planned primarily for college entrance, free-hand, mechanical, and architectural drawing are required.

2. The Young Men's Christian Association and two business colleges are private schools giving evening courses. The work of the business colleges is commercial education. The Y. M. C. A. work is largely industrial in character.

Six industrial courses were offered by the association, namely, elementary and advanced mechanical drawing, architecture and building construction, sheet-metal work, electricity, and shop mathe-

matics. In these classes there were enrolled, during the year 1915–16, 71 young men of the ages of 17 to 21 or over. The drawing courses were most in demand, judging by the enrollment in the different classes. These courses were taught by practical men.

2. PROVISIONS FOR INDUSTRIAL EDUCATION IN THE INDUSTRIES.

APPRENTICE AGREEMENTS.

As the result of inquiries made of manufacturers only three reported having any apprenticeship agreements. Some firms which were not reached are reported to have agreements. One such firm maintains a regular class at the Young Men's ChristianAssociation one night each week. Several firms pay the tuition and traveling expenses, besides allowing some time off, of boys who attend schools in Philadelphia. It is understood that Delaware College will arrange cooperative courses in engineering at an early date.

One manufacturer reports that the opportunities for boys who go through the apprentice system with a reasonable education are fair if they are willing to work with their hands and their brains.

Superior ability and unusual interest in the business seem to work almost invariably for the shortening of the apprentice period or for more rapid advancement.

Several employers are encouraging their apprentices to attend night school or to undertake correspondence-school work. Apprenticeship agreements, however, are rare. According to the opinions of many of the employees in Wilmington apprenticeship agreements constitute one of the greatest needs in the labor situation.

One manufacturer reports that, "We pay their tuition at Young Men's Christian Association night school." Another says, "At Christmas time, to encourage the apprentices, the length of their apprentice period is reduced certain periods." For instance, a boy in the second or third year, who has been attentive to his work and has made progress, will receive as high as six weeks' reduction in the apprenticeship period. If the reduction is made in the second year, for example, this brings him six weeks nearer to the period when he receives the increased rate of wages, and also the date when he receives his freedom. Similarly, for boys who do outside work, usually drafting-room work at the Young Men's Christian Association, an arbitrary reduction is made running from two to three weeks.

The representative of a large ship and car building establishment stated that they offer to apprentices in the following-named departments a free course in the Young Men's Christian Association night school after they have served one year, provided their attendance during that year has been 97 per cent or more of the working year: Blacksmith shop, tin and copper shop, pattern shop, pipe shop, machine shop, joiner shop, paint shop, mold loft, and electric shop.

CHAPTER VI.

SUGGESTIONS FOR A PROGRAM OF INDUSTRIAL EDUCATION.

I. ESSENTIAL ELEMENTS TO BE PROVIDED.

A survey of a school system or of any other system or situation should be constructive in character. This is an age of efficiency, one of economy in management. This applies as well to school systems as to big business. The time used to be when a school put a new subject into its curriculum because a neighboring school had done so, or because it was being talked about at educational gatherings. To-day conditions have changed. Changes are made in the course of study or in the administration of the system largely because an inquiry into conditions warrant and suggest such changes.

Also the time has passed when a school system may be considered as a thing by itself in a community, an institution unaffected by other institutions and agencies. The schools should be an active force in the entire life of a community, and in formulating their curriculum and in their entire organization. The means by which people in a given locality make their living, the industrial life of a community, has more to do with shaping the customs and social institutions of that community than any other agency or force. The schools are no exception. But to a large degree they have ignored this force. There is now in many parts of the country a popular conviction that the schools should serve more effectively the majority of the people as well as the small minority representing those who are to go into higher institutions of learning and into the professions.

The demands for commercial education first had their effect, and commercial and business courses are now found in many high schools. The demands of industrial education (another phase of vocational education) must also receive consideration. These demands are the more insistent as the calls for more skill in industry and more attention to industrial design become more pronounced, and because of the realization that industry itself is gradually leaving to other agencies a large part of the responsibility it formerly assumed in the training of youth for its life work.

The schools of Wilmington are trying to meet the demand, which is a heavy one. But the schools, unaided by industry itself, can not meet the call for young people trained ready for work in the multiplex industrial system. To a considerable degree through its public schools, its private and parochial schools, the city has been meeting the demand for general knowledge and culture. These schools have given some attention to training for citizenship; recently the foreigner has had his needs for citizenship met in a more definite manner in the Americanization schools established under the public school system. But, in the education of every individual there are three essential elements to be provided—education for general knowledge and culture, education for citizenship, and third, but not less important, education for vocation.

In many respects the work in manual arts in the public and private schools of Wilmington is excellent, much better than the average, but it does not go far enough to meet the demands for the industrial phase of vocational education. To a large degree Wilmington is an industrial city, and its importance in this respect is increasing. Both employers and employees recognize the need for industrial education, and they are ready to cooperate with the school authorities in working out a practical plan of action.

II. SUGGESTIONS FOR INDUSTRIAL EDUCATION IN THE SCHOOLS.

During the school year 1915-16 there were approximately 17,000 children in the schools of Wilmington, of whom 12,000 were in the public schools and 5,000 in the parochial and private schools. Of the 12,000 children who were enrolled in the public schools, approximately 8,000 were in the primary grades (grades 1 to 5 inclusive), 2,800 in the grammar grades (grades 6 to 8 inclusive), and 1,200 in the high schools.

All of the grammar grade white pupils are accommodated in four buildings which are centrally located in the city. There is but one white high school. Thus centralized, the pupils may the more easily be reached for purposes of industrial education.

THE PRIMARY GRADES.

In these grades there should be no differentiation in the work for boys and girls. Something of a general knowledge of the fundamental industries should be the aim of the work in the manual arts. The handling of materials which are used in the industries is in itself worth while, and leads to considerable industrial intelligence. Educational leaders have pointed out that in an industrial democracy every citizen should have more or less industrial intelligence and the

industrial appreciation and sympathy which will grow out of suitable work in the manual arts.

In the primary grades the children are too young for specialization, but they should work with the materials which are used in the fundamental arts of industry. Wood, metal, paper, clay, and textiles should be handled and formed into simple articles of value. The materials themselves should be the basis for study as to the sources from which they are derived, for study of the developing processes which have brought them into the varied uses of modern times, and for a study of their manufacture in its simpler forms. The classroom work should be accompanied with talks by the teachers, visits to museums and to the industries themselves. Correlation with number work, history and geography stories, and nature study, should be made at all times.

The work should be under the direct charge of the regular grade teachers. Designs for the things to be constructed should be made by the pupils so far as practicable. The so-called art work and the industrial arts should work together at all times.

The best results will be obtained if the use of a single material is not confined to any one grade, but if all materials are used in as many grades as the developing work demands.

The development of skill should not be overemphasized. Of course, at all times a child should do his best, but skill is not to be the chief aim in the lower grades. A broad and general acquaintance with the industries by actual participation in typical activities is to be sought.

All theory and discussion should arise out of the actual work with materials. Valuable suggestions in detail for work in the grades may be obtained from the courses of study which have been published in a number of progressive cities.

The handwork may be conducted in the regular classrooms. Little special equipment will be necessary. A special worktable or bench in the front of the classroom will be helpful.

The grade teachers should have the assistance and advice of the art and industrial arts supervisors.

Often the children of a room may be organized into a miniature factory force for the making of some articles needed in the school. The tablets or notebooks will provide such an occasion. Small looms to be used in weaving may be made in this way by one grade for the use of pupils in a lower grade.

The art and handwork as now being done by the grade teachers under direction of the art supervisor may be made the basis for further development along the lines suggested above. A resourceful supervisor of industrial arts will be necessary to develop the course as it should be.

It is suggested that sewing which is now being given to the fourth and fifth grade girls be omitted until the sixth year, and that it be replaced by work suggested above. This refers to fine sewing. Work with textiles, weaving, and the coarser stitches should be included in the work of the primary grades. This work affords a good introduction to the finer sewing of the upper grades.

THE GRAMMAR GRADES.

The industrial arts work of the primary grades is to be given for purposes of general education and culture. It provides a good foundation for the specialized industrial and household arts of the upper grades. The handling of materials and the performing of the simpler processes of construction, together with talks by the teacher, study, and visits to factories, which will accompany the practical work as a study of the fundamental industries is made, will lay a strong foundation for the more specialized and intensive study of a few industries in the grammar grades.

It is in the upper grades that the effects of elimination are most felt. Compulsory school attendance ends here; the majority of the children drop out of school. As, in the primary grades, the purpose of the work is for a general acquaintance with the industries, so, in the grammar grades, the work should be, to a large extent, for purposes of vocational guidance, to assist in finding out aptitudes and vocational tendencies.

The work for boys and girls should be differentiated. Each child should become acquainted with the chief industries in which members of the same sex are engaged. These should represent the large trade groups, and industries of local importance should have a prominent place among those selected for study.

The boys and girls of the grammar grades are still too young to make direct preparation for the trades. But more or less of industrial intelligence and appreciation should precede industrial efficiency. And these things are essential in the education of every individual, whether he goes into the industries or not. In the grammar grades the pupil should be given an opportunity to gain sufficient knowledge of the industries to discover whether he is best adapted to enter the industrial group of occupations; and also, to some extent at least, he should be able to find out the particular group of industries for which he has a liking or special aptitude.

The boys of the grammar grades should make a study of from three to six of the principal industrial occupation groups. Probably the best manner in which to present each occupation group is by a more or less intensive study of one of the principal trades in that group. Some of these groups are the metal-trades group, the build-

ing-trades group, the printing-trades group, the electrical group, the machine operating trades group, the agricultural group, and so on.

As was suggested for the primary grades, practical work, actual participation in typical industrial processes, should form the basis for each course. Study of materials used, methods and processes of manufacture, and labor conditions in each industry should be taken up as the practical work progresses. At all times theory should follow and grow out of practice. As they work with their hands, the children will ask questions, they will want to know the "why" of what they are doing; thus opportunity for theory, for supplemental study, will arise.

In like manner, the work for the girls should be organized. Various phases of the household arts should be developed, including foods and food preparation, textiles and garment making, and the care and management of the home. In addition, some attention should be given to the principal trades open to women. Some of these are connected with the operating of machines of various types. Probably little of practical nature can be done with the latter phase of the girls' work for lack of equipment, but classroom work may be attempted in conjunction with visits to factories.

Home planning, furnishing, and decoration are phases of work of great value to girls.

The art work should be largely in the nature of design, and closely correlated with the constructive work both of the boys and of the girls.

Special teachers are required to take care of the industrial and household arts work of the grammar grades; likewise special rooms and equipment are needed.

In the four buildings housing the grammar grades, instruction in art work and sewing are being given to all girls, woodworking to the boys of at least two of the larger schools, and mechanical drawing and some form of construction work to all boys. Special rooms and some special equipment are being used now in each school. Sewing and art supervisors, special teachers of art, sewing, and construction work (only one man, however) are employed at present in these schools.

The most important step essential to the development of a good course in the industrial arts in the grammar grades is the employment of a capable man for the work in each school, at least one for each of the two larger schools. One instructor for the smaller schools combined might answer for the present. Part of the time of an industrial art director should be given to the grammar grades.

Instead of woodworking only, several lines of industrial work should be undertaken. Table 57 suggests a general outline of courses.

TABLE 57.—*Suggested course in industrial and household arts for grammar grades.*

Grades.	Boys.					Girls.		
	Design.	Mechanical drawing.	Industrial arts.			Design.	Household arts.	
			Course A.	Course B.	Course C.		Course A.	Course B.
Sixth	Largely articles to be made (a progressive course).	Largely working plans of articles to be made (a progressive course).	Carpentry	Printing	Bookbinding and printing each one-half year.	Related to household and home planning, furnishing, and decoration.	Sewing	Sewing, cookery, and general home management.
Seventh	Same, with new principles of design.	do	Elementary benchwork in wood.	Woodwork (carpentry or benchwork).	Woodwork (carpentry and benchwork each one-half year).	do	do	Do.
Eighth	Same, with new principles of design.	do	Elementary metal work.	Metal work.	Metal work and electricity each one-half year.	do	Cookery	Do.

At first, and until additional equipment can be provided, course "A" should be undertaken. Here two lines of woodworking, followed in the eighth grade by metal working, are suggested. The course in metal working can be carried out with very little equipment other than that used for woodwork. The rougher carpentry work suggested is even more closely related to actual industrial work than the usual bench woodwork given in schools; it will appeal to the boys more, and provides opportunity for doing work for the school of practical value.

To some extent the industrial arts work may be self-supporting; the material used, at least, may be covered by the value of the product.

SUGGESTED OUTLINES OF COURSES.

Printing is a very important industrial-arts course, and need not involve great additional expense to the school, because much printing for school use can be done in the school shop. Suitable equipment for printing costs about as much as equipment for woodworking. A separate room will be required, or one end of one in the present shops.

A course in bookbinding and paper and cardboard work should take up problems which are thoroughly practical. The equipment for this work need not be expensive. No separate room need be provided.

Equipment for cookery need not be elaborate or very expensive. Excellent work, at least for a beginning, may be done with a modest equipment. A separate room is desirable.

The following outlines of courses in paper, printing, frame-house construction, elementary benchwork, and metal work were developed by a committee of teachers, and are here suggested for adaptation to the requirements of the Wilmington schools.

Paper manufacture and industries using paper.

No.	Group.	Processes.	New tools.
1	Paper making (hand process).	Beating, pouring, screening, pressing, drying, calendering, cutting, counting, jogging.	Screen, felt, heater, iron, paper cutter.
2	Envelopes and portfolios.	Cutting, folding, pasting	Scissors, rule.
3	Boxes and cases	Cutting, creasing, folding, pasting	Knife.
4	Tablets	Counting, cutting, covering, jogging, gluing, cutting down, taping, trimming.	Tape and screw presses.
5	Composition books	Counting, jogging, folding, sewing, taping, trimming.	
6	Pamphlet covers	Cutting, folding, taping	
7	Loose-leaf covers	Cutting, hinging, folding, punching, putting in eyelets.	Punch.
8	Bookbinding (casing style).	Marking, sawing, sewing, gluing, rounding, trimming, casing.	Sewing-frame, backing-press, glue pot, brush, hammer.
9	Book mending	Mending torn leaves, loose leaves, damaged cover; re-covering, etc.	

The industries using paper in some of its forms are numerous and seem especially well adapted to average school conditions. A special room is not necessary, neither are many and expensive tools.

Many articles which can be made, coming under each group, may be of use in the school. The necessary equipment for this work may soon be paid for in the saving to the school of the expense of purchasing many things which can be made by the pupils taking the course.

Printing.

No.	Group.	Processes.	Topics for discussion, etc.
1	Composition	Learning case, holding stick, setting type, cutting leads.	Historic methods of transmitting knowledge, discovery of movable type, capitalization, punctuation, dividing words into syllables, spacing, printing measurements linotype machines, proof reading.
2	Distribution	Wetting, distributing	
3	Proof	Moving type from stick to galley, tying, taking and correcting proof, correcting type.	
4	Imposition	Moving type to stone, placing furniture and quoins, locking form.	
5	Presswork	Making ready tympan, overlay and underlay; proper impression; inking; feeding.	Invention of printing press, composition of rollers and ink, mixing colors, historic presses.
6	Job printing		
7	Methods of illustrating.	Wood-cut and block-letter making	Wood cuts, stereotype, chalk plates, etching, photo-engraving, electrotyping.

Many things for the school may be done in this course, such as printing programs, cards, stationery, the school paper or magazine, posters, blanks, etc.

A special room is almost absolutely essential, as well as considerable special equipment. However, the expense need not be more than in equipping for benchwork in wood.

This is an industry that is rapidly being given a place in the school curriculum, and it is meeting with much favor with school authorities.

Frame-house construction.

No.	Group.	Processes.	New tools.
1	Staking off and getting levels.	Measuring, squaring, leveling	Hatchet, level, square, measuring pole, straightedge.
2	Excavation	Digging	Spade, pick, shovel.
3	Foundation	Mixing, tempering, pouring, or laying.	Box, screen, trowel.
4	Floor frame	Sawing, fitting, squaring, nailing	Saws, chisel, hammer, mallet, try square.
5	Wall frame		
6	Wall sheathing		
7	Roof frame		
8	Roof sheathing		
9	Roof	Chalk lining, nailing	
10	Making and setting frames.	Planing, fitting	Planes.
11	Siding		
12	Exterior finish—painting.	Painting	Brush.
13	Floors	Blind nailing, matching	
14	Interior finish—painting, staining, varnishing, etc.		
15	Hanging doors, sash, screens, etc.	Fitting, hinging, putting on locks, etc.	Screw driver, gauge, brace, bits.

This is an important industry and one found in every community. A practical building problem is possible in every school. Such projects as shed for outdoor physical apparatus, tool house for the school garden; garage, children's play house, poultry house to be sold; partitions in the school basement, etc., are possible.

A boy having had this course, with work carefully selected from the different groups, will be as well qualified to take up cabinet-making in the high school as one who has had an elementary benchwork course in wood in the upper grades.

Elementary bench work.

No.	Group.	New tools.	Processes.	Projects.
1	Laying out	Rule, try-square, framing square, dividers, etc.	Measuring, lining, gaging, describing circles, etc.	Board loom, checker board, target, rule.
2	Cutting out	Back, rip. and crosscutting saws.	Sawing, using bench hook, trestles, and vise.	Sandpaper block, bench-hook 4-piece loom.
3	Squaring to size	Planes	Planing and testing	Boxes, miter box.
4	Modifying:			
	a. Using plane	T-bevel	Chamfering, beveling	Clothes cleat, cutting board, cylinder.
	b. Using chisel	Chisels	Paring	Bookrack, tool rack, picture frame.
	c. Using gouge	Gouges, veining tool	Hollowing out, cutting grooves.	Desk tray, bookrack ends.
	d. Using turning saw.	Turning saw	Outside and inside curve sawing.	Picture frame, coat hanger.
	e. Using spokeshave.	Spokeshave	Smoothing curves, modeling.	Handles, pointer, coat hanger.
5	Sharpening tools		Grinding, whetting	Chisel, plane iron, gouge knife.
6	Smoothing	Scraper, sandpaper	Scraping, sandpapering	
7	Finishing	Brushes	Applying finish and rubbing down.	
8	Fitting and assembling.	Brace, bits, clamps	Boring, cutting	Trestle, cross stand, taboret, mitered frame, stepladder, sled, shelves, cases, bookbinding, clamps, apparatus.
9	Fastening	Hammer, screw driver, nail set, etc.		
10	Finishing: Reviewed and continued.			

This course in bench work in wood has several distinctive features. One is the clear separation of work into groups, each group standing for certain definite tool processes. Also in each group some projects are entirely completed. To do this some other tool processes may have to be introduced into the group incidentally, but these processes have only a minor place there. The principal work on each project is done with the tools of the group.

Another feature for which this course stands is that of constructing many really useful projects, a number of which are for use in the school. Boys often, if properly directed, take more interest in making articles for the school than for themselves.

Metal work.

No.	Group.	New tools.	Processes.	Projects.
1	Wire work	Flat and round nose pliers, files, vise, rule, draw plate.	Cutting, bending, forming, wire drawing.	Staple, skewer, paper clip, ring, chain, hinge, corkscrew, carpet beater, coat hanger.
2	Strip metal work	Cold chisel, center punch, snips, hammers, drills, awl, try-square, rivet set.	Drilling, riveting, cutting, bending.	Picture hook, clip, angle iron, hasp, bracket, stand, candlestick, shade.
3	Sheet metal (without solder).		Cutting, bending, drilling, sawing, filing, riveting.	Book corners, blotter-pad corners, box, candlestick, shade, lantern.
4	Sheet metal (with solder).	Soldering iron, torch, creaser.	Cutting, bending, casing, stiffening, soldering.	Pipe, biscuit cutter, cup, funnel, pail.
5	Filing and fitting	Variety of files	Cutting with snips and chisel, filing, fitting, testing.	Escutcheon, key, wrench, calipers.
6	Shaping from the flat.	Beating, planishing and finishing hammers, anvils.	Raising to shape, planishing, filing, annealing, polishing, coloring with flame, acids, etc.	Tray, candlestick, plate, cup, bowl, covers.

So often in the elementary school practically all of the construction work provided for the boys has been woodworking. The woodworking industries are important ones, but there are other and just as important fields, among them the metal-working industries holding an important place. In the State of Delaware the metal-working industries are so important that they should have a place in every course of study in the industrial arts.

It is possible to carry out a large part of this course in metal work on the woodworking benches and with a small amount of additional equipment.

A great many useful articles may be made from metal. This is a good "tinkering" course for boys, enabling them to do many repair jobs about the home.

TIME ALLOWANCE.

At present two hours per week in the sixth grade and two and one-half hours in the seventh and eighth grades are being devoted to art and manual training for the boys, and the same amount of time for art and sewing for the girls. This is as much time as is usually given to these lines of work in public schools, though hardly sufficient to realize the possibilities of the new work suggested. An additional hour per week is desirable.

It is further suggested that in one of the grammar schools, at least, one sixth grade, one seventh grade, and one eighth grade be permitted to arrange schedules so that one-half of each day may be given over to industrial and household arts. Preferably groups of boys and girls who are most apt to drop out at the end of the grades, and who will probably enter the industries, should be selected.

All of the academic work of these selected groups should be closely correlated with the industrial work.

Course C, Table 57, provides for six different lines of work in the three grammar grades. Such industrial classes should be able to do a certain amount of repairing for the school and to make a great many needed articles.

Each different kind of work, whether in this more extended industrial course or in the briefer course, will open up to the boy or to the girl a different industry. By this means they will be better able to decide whether industrial work is suited to them, and to judge as to what group of trades appeals to them most, and for which one they seem to have the most aptitude.

At present only a very little woodworking is given to the boys before they reach the high school. Consequently, the outlook upon conditions in industry secured by boys in the Wilmington public schools is extremely limited.

A variety of different industrial courses should have some influence in keeping boys and girls in school. Mr. Grantland, the State child labor inspector, says that what is most needed in the Wilmington schools is considerable "elementary industrial work for boys who never will reach the high school."

THE HIGH SCHOOL.

Conditions in Wilmington warrant the giving of more attention at present to the development of strong industrial arts and household arts courses in the grammar schools than in the high school.

However, the high school already possesses equipment which can be more fully utilized and the school is not fully serving its purpose unless it does more in these lines than at present.

As already indicated, definite apprenticeship systems are found in but few of Wilmington's industries. The time is ripe for the public school to do its duty in cooperating with the industries in training young people for industrial employment.

The high school can still further serve the community in organizing special industrial classes, admitting boys and girls who have not necessarily completed a grammar-school education but who are over age for the grades and who are industrially inclined.

Because children are over age for the grades and are discouraged in attempting a regular grammar course or a regular high-school course should not necessarily mean that they can get no further benefit from the schools. Special industrial classes in the high school, where more elaborate and varied equipments will be found, should take care of such pupils.

It seems wise to require not more than one year of industrial and household arts of all pupils in the high school. This should be the first year, and one and one-half hours per day should be given to the work.

Design and mechanical drawing related to the industrial course should be required in this year. This may have to be given during a part of the 1½-hour industrial-arts period.

For the boys, the first year's work might profitably be divided equally between elementary cabinetmaking and metal working, somewhat as at present. The courses should, however, represent more than mere shopwork. Study of materials, processes of manufacture, history of the industry, and the like, all closely related to the shopwork and growing out of it, should be made a part of each course. The construction should be based on designs made by the pupils. Mere exercise work should be reduced to a minimum and arranged to precede immediately the practical problem employing the exercise.

The first year's work required of the girls might be divided between sewing and cookery, with accompanying work in design.

Elective courses for both girls and boys should be offered. For boys there might be forging and art metal work; wood turning pattern making, and foundry work; advanced machine-shop work; printing; electrical construction; and so on. For the girls, elective courses should include sewing; cookery; house planning, decoration, and furnishing; art crafts, such as leather work, pottery, art metal, etc. Each course should be accompanied by related design and working drawing courses pursued at the same time.

SPECIAL COURSES.

This study developed the fact that a number of the workers in the trades had taken at least a partial high-school course, also that both boys and girls were dropping out of the high school to enter the trades.

The manufacturers stated almost unanimously that they preferred apprentices who have had some high-school work. The industries of Wilmington to a very high degree require skilled workmen; a number of regular high-school courses would materially help such employees to a better understanding of their work.

Two years ago one of the high-school manual-training teachers found, on investigation, that 14 manufacturers were ready to join with the high school in arranging cooperative courses for boys. This study showed the same general attitude on the part of other manufacturers. It seems that the only reason that this work has not already been started in the high school is the lack of needed funds.

These should be provided, and several such courses started at once. The metal-working industries seem to furnish the best place for making a beginning.

EVENING CLASSES.

In evening classes, the greatest need seems to be for short unit courses along a number of lines. Various trade groups should be provided for.

Foremen and others of exceptional ability in the different industries, who possess some teaching ability as well, could be called upon to give some of these courses. The industrial arts supervisor might be a suitable person to have general supervision of this work, or possibly one of the industrial arts teachers. No doubt a number of courses could be given by the industrial arts teachers in the schools.

Blue-print reading, estimating, mechanical drawing, architectural drawing, different branches of shop mathematics, use of the framing square, are courses for which a need was expressed by the workers. Courses in the common branches are now given by the schools. This work should be given in the same buildings with the industrial

courses, and those schools should be selected which will reach the workers in different sections of the city.

A number of short courses of a few weeks' duration, each for which there seems to be the greatest demand, should be offered first, and others organized as demand arises.

III. SUGGESTIONS FOR INDUSTRIAL EDUCATION IN THE INDUSTRIES.

APPRENTICESHIP AGREEMENTS.

According to the United States census for 1910, there were 417 apprentices—371 males and 46 females—in the manufacturing and mechanical industries of Wilmington. From the statements of groups of workmen in the various industries of the city, there are very few instances of definite agreement between employer and apprentice. A number of workmen made the statement that the thing most needed by Wilmington industrial workers is a revival of the apprenticeship agreement, adapted to present conditions.

Employers stated almost unanimously that apprentices and workmen in their employ are given every opportunity to learn the various phases of their different lines of industry by being shifted about as much as possible, but there are few definite agreements to this effect between employer and union or employer and apprentice.

In Wilmington, as also brought out in the Minneapolis survey, the helper system is largely replacing other forms of apprenticeship. Probably little can be done here, as elsewhere, in working up sentiment among the employers for trade agreements. The boy himself seems averse to anything very binding on his part, frequently changing from one industry to another or from one employer to another after starting on his apprentice period.

A few progressive manufacturers are encouraging their apprentices to attend evening schools at the Young Men's Christian Association and elsewhere, often paying their expenses or otherwise making it worth while for them to attend. Several employers are even maintaining special evening classes for their employees.

Employers, in general, however, seem ready to work with the schools in organizing and maintaining cooperative courses and evening classes. No doubt the majority of them would give financial or other material encouragement to apprentices to attend these latter if the schools would establish them.

SUMMARY OF SUGGESTIONS.

1. That a capable supervisor of industrial arts (a man) be appointed and that men teachers for the industrial arts work for the boys of the grammar grades be appointed.

2. That both for boys and for girls in the grammar schools several different lines of industrial work be provided, instead of only one for each as at present.

3. That in one of the grammar schools (or possibly in the high-school building) special industrial classes be established, devoting one-half of each day to industrial work.

4. That throughout the school system the art work place more emphasis on design, and be more closely correlated with the work in industrial and household arts.

5. That several elective courses in industrial lines for boys and girls in the high school be offered.

6. That special industrial courses be offered in the high school, open to boys and girls industrially inclined although they may not have completed a full grammar course.

7. That cooperative courses be arranged by the high school in conjunction with the metalworking and woodworking industries.

8. That short unit evening courses in a number of industrial lines be organized for industrial work; these to be given in several public school buildings.

APPENDIXES—FORMS USED IN MAKING THIS SURVEY.

APPENDIX A.

Washington, D. C., November 29, 1915.

DEPARTMENT OF THE INTERIOR,
U. S. Bureau of Education.

INDUSTRIAL EDUCATION SECTION, DELAWARE STATE SURVEY.

PURPOSE.

The purpose of the Industrial Education Section of the Delaware State Survey includes the following studies, so far as may be possible in the limited time available:

1. A study of the schools, to determine what kind, and how much, education the young people of the State are receiving, and what facilities are available for further development.
2. A study of the industries, to determine the extent of the demand for young people, the qualifications expected of the workers, something of the character of the occupations engaged in, and the need of education.
3. A study of present provisions for industrial education.
   (*a*) In the schools.
   (*b*) In the industries.
4. Suggestions for a program of industrial education.

NOTE: This inquiry will necessarily be limited to the city of Wilmington for the present.

OUTLINE OF STUDIES.

I. *A study of the schools.*
   1. Legislation affecting school attendance.
      (*a*) State.
         (1) Compulsory attendance laws.
         (2) Child labor laws.
         (3) Regulations of State Department of Education.
         (4) Enforcement.
      (*b*) County and City.
         (1) Enactments.
         (2) Regulations of Boards of Education.
         (3) Enforcement.
   2. The Schools.
      (*a*) Organization.
      (*b*) Financial support.
      (*c*) Enrollment and classification of pupils.
         (1) Facts and comparisons.
         (2) Proportion of persons of school age in school.
      (*d*) Service rendered to those not in regular day schools.
      (*e*) Courses of study.

I. *A study of the schools*—Continued.

3. Elimination of pupils from the schools.
   - (*a*) Facts and comparisons.
   - (*b*) Facts concerning 13–14-years-old pupils in school.
   - (*c*) Facts concerning high school boys and girls.

II. *A study of the industries.*

1. Importance and scope.
2. Industrial pursuits.
   - (*a*) Listed in order of importance.
   - (*b*) Value of products, and number of employees.
   - (*c*) Analysis of principal occupations.
   - (*d*) Wages and hours of labor.
   - (*e*) Opportunities for advancement.
   - (*f*) Demand in each for general education, special trade education, special manipulative skill.
   - (*g*) Demand in each for boys and girls
3. Young people in the industries.
   - (*a*) Those working under special permits from the State.
     - (a) Permit boys.
     - (b) Employment-certificate boys and girls.
     - (1) School history.
     - (2) Present occupations.
     - (3) Prospects for advancement.
   - (*b*) Older boys and girls.
     - (1) School history.
     - (2) Efforts to continue education.
     - (3) Present occupations.
     - (4) Prospects for advancement.
   - (*c*) Educational needs.
     - (1) As expressed by the workers.
     - (2) As expressed by employers.

III. *Present provisions for industrial education.*

1. In the schools.
   - (*a*) Public schools.
     - (1) Day schools.
       - (*a*) Elementary.
       - (*b*) High schools.
       - (*c*) Continuation schools.
     - (2) Evening schools.
   - (*b*) Private schools.
     - (1) Day schools.
     - (2) Evening schools.
2. In the industries.
   - (*a*) Apprenticeship agreements.
   - (*b*) Special schools or classes.
   - (*c*) Shifting of workers to secure knowledge of various processes, machines, etc.
   - (*d*) Encouragement of workers to self-improvement.

IV. *Suggestions for program of industrial education.*

1. Essential elements to be provided.
   - (*a*) Education for general knowledge and culture.
   - (*b*) Education for citizenship.
   - (*c*) Education for vocation.

IV. *Suggestions for program of industrial education*—Continued.

2. Provision in the schools.
   - (*a*) Elementary schools.
   - (*b*) High schools.
   - (*c*) Special schools or classes during the day.
   - (*d*) Evening schools or classes.
3. Provision in the industries.
   - (*a*) Apprenticeship agreements.
   - (*b*) Special schools or classes.
4. Cooperation involving workers, employers, and the schools.

APPENDIX B.

DEPARTMENT OF THE INTERIOR
U. S. Bureau of Education

INDUSTRIAL EDUCATION SECTION
DELAWARE STATE SURVEY

RECORD OF 13 OR 14 YEAR-OLD PUPIL.

Name_____Boy or girl_____ Grade_____ Age_____
School_____ Teacher_____
Place of birth: Post office_____ State_____
Country (if not born in United States)_____
Do you intend to finish the eighth grade?_____ To go to high school?_____
To any other school, or college?_____ What?_____
Are you now employed at any kind of work out of school hours?_____
If so, at what kind of work?_____
What do you plan to do to earn a living when you grow up?_____
Why do you plan to do this?_____
Place of your father's birth: Post office_____ State_____
Country (if not born in United States)_____
What is your father's occupation?_____
Give age of each brother under 21 who is at work and his occupation:

1. Age_____Years; Occupation_____
   Name_____ Address _____
2. Age_____Years; Occupation_____
   Name_____ Address _____
3. Age_____Years; Occupation_____
   Name_____ Address _____

Give age of each sister under 21 who is at work and her occupation:

1. Age_____Years; Occupation_____
   Name_____ Address _____
2. Age_____Years; Occupation_____
   Name_____ Address _____
3. Age_____Years; Occupation_____
   Name_____ Address _____

APPENDIX C.

DEPARTMENT OF THE INTERIOR, U. S. Bureau of Education

INDUSTRIAL EDUCATION SECTION DELAWARE STATE SURVEY

RECORD OF PERMIT, BOY OR GIRL.

Name of child_____ Sex_____ Race_____
Place of birth_____ Date_____ Age_____
Date of permit_____
Applicant's name_____ Relation to child_____
Reasons for going to work_____
Hours when he or she is to work_____
Grade in school when this permit is granted_____
Regularity of school attendance_____
Conduct of child in this grade_____
Physical condition of child_____
Effect of work on character of school work_____
On school attendance_____ On conduct_____
On physical condition of child_____
When did child permanently withdraw from school_____
Why?_____
First occupation_____ Kind of merchandise_____
Date began_____ Date left_____ Earnings per week_____
Second occupation_____ Kind of merchandise_____
Date began_____ Date left_____ Earnings per week_____
Third occupation_____ Kind of merchandise_____
Date began_____ Date left_____ Earnings per week_____

APPENDIX D.

DEPARTMENT OF THE INTERIOR,
U. S. Bureau of Education

INDUSTRIAL EDUCATION SECTION
DELAWARE STATE SURVEY

RECORD OF HOLDER OF GENERAL EMPLOYMENT CERTIFICATE.

Name_____Boy or girl_____Race_____
Place of birth_____Date_____Age_____Years.
Date of application for certificate_____Date issued_____
Applicant's name_____Relation to child_____
Applicant's address_____Occupation_____
Reason given for going to work_____
Grade in school when left to go to work_____
Quality of work done in this grade_____In grades below this_____
Regularity of school attendance_____Deportment_____
Physical condition of child_____
Did this child reenter school after leaving to go to work?_____
First position.—Kind of work_____When employed_____
Name of firm and business_____
When left this position_____Why?_____Wages_____
Second position.—Kind of work_____When employed_____
Name of firm and business_____
When left this position_____Why?_____Wages_____
Third position.—Kind of work_____When employed_____
Name of firm and business_____
When left this position_____Why?_____Wages_____
Fourth position.—Kind of work_____When employed_____
Name of firm and business_____
When left this position_____Why?_____Wages_____

APPENDIX E.

DEPARTMENT OF THE INTERIOR,
U. S. Bureau of Education

INDUSTRIAL EDUCATION SECTION
DELAWARE STATE SURVEY

To the Principal of School No.—:

During 1915 the boys listed below were granted permits to work outside of school hours. Please indicate whether, in the judgment of yourself and his room teacher, there has been any noticeable change in each boy in the particulars noted below since he has been working. Other information about any of these boys will be be appreciated. Please return this blank with information to the superintendent's office not later than January 14.

Name.	Date of permit.	Grade.	Character of school work.	School attendance.	Conduct.	Physical condition.	Remarks.
.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....

APPENDIX F.

DEPARTMENT OF THE INTERIOR **INDUSTRIAL EDUCATION SECTION**
U. S. Bureau of Education **DELAWARE STATE SURVEY**

RECORD OF WORKER UNDER 21 YEARS OF AGE.

Name_____ Sex_____ Age_____Years.
Home address (Street and No.)_____
Place of birth: Post Office_____State_____
Country (if not born in United States)_____
When did you leave school? Year_____Month_____Why?_____
Where did you last go to school?_____
What grade did you complete before leaving school?_____
Was it a public, parochial, or other private school?_____
What correspondence school courses have you taken?_____
What evening school courses have you taken?_____
Do you draw books from the public library?_____
Name and business of your present employer_____
What is your work with this employer?_____
What other work have you done with this employer?_____
How long have you been employed here? Years_____Months_____Weeks_____

Record of previous employment.			Time employed.		
After leaving school.	Employer.	Kind of work.	Years.	Months.	Weeks.
First job					
Second job					
Third job					
Fourth job					
Fifth job					
Sixth job					

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DEPARTMENT OF THE INTERIOR
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THE NATIONAL COUNCIL OF PRIMARY EDUCATION

REPORT OF THE
SECOND ANNUAL MEETING AT KANSAS CITY, MO., FEBRUARY 27, 1917, AND OF THE THIRD ANNUAL MEETING AT ATLANTIC CITY, N. J., FEBRUARY 26, 1918

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THE NATIONAL COUNCIL OF PRIMARY EDUCATION.

ABSTRACTS OF PAPERS AND REPORTS READ AT THE SECOND ANNUAL MEETING AT KANSAS CITY, MO., FEBRUARY 27, 1917.

TIME ALLOTMENT IN PRIMARY SCHOOLS.

By Miss Florence C. Fox,

Specialist, United States Bureau of Education.

This report shows the time allotment in a representative city in each of 18 States, as follows: New York, Ohio, Pennsylvania, Rhode Island, Texas, Virginia, Wisconsin, Washington, Indiana, Iowa, California, Mississippi, Illinois, Michigan, Maryland, Missouri, New Jersey, and Nebraska.

A questionnaire was sent to the primary teachers of these cities asking them to state the time actually spent by them in teaching each subject. Handwork included (1) modeling, sand or clay; (2) drawing, blackboard and crayon; (3) painting, ink and water color; (4) cutting, white and colored papers; (5) making, cardboard sloyd; (6) building, on the sand table; (8) stenciling.

Under play were included (1) games, directed and free; (2) dramatization, posing and acting.

Music included (1) singing, (2) dancing, and (3) rhythm. Nature study embraced three forms of activity, (1) excursions, (2) field lessons, and (3) experiments.

Minutes per day devoted to the several subjects in the primary grades of 18 representative cities.

Daily time schedule 300 minutes.

Subject.	Grade I.		Grade II.		Grade III.	
	Minutes.	Per cent.	Minutes.	Per cent.	Minutes.	Per cent.
1. Reading	62	20⅔	58	19	44	14⅔
2. Phonics	26	8⅔	16	5⅓	12	4
3. Spelling	11	3⅔	20	6⅔	20	6⅔
4. Arithmetic	16	5⅓	30	10	40	13⅓
5. Language	25	8⅓	27	9	36	12
6. Drawing	14	4⅔	14	4⅔	14	4⅔
7. Games	13	4⅓	12	4	13	4⅓
8. Nature study	12	4	12	4	15	5
9. Music	12	4	14	4⅔	17	5⅔
10. Handwork	11	3⅔	11	3⅔	11	3⅔

Note.—This table comprises a partial list only of the subjects in the daily program. It is intended to show the average daily time allotment accorded the primary activities in comparison with that given to the five fundamental subjects.

It was found that the subject of reading absorbed the major portion of the time on every program, taking up 20 per cent of the time in the first grade, 19 per cent in the second, and 14 per cent in the third. Handwork comes at the bottom of the list in all the grades, receiving 3⅔ per cent of the time allotment, or a fraction over 11 minutes out of 300 minutes for the entire day of school. Games, nature study, music, and drawing fall into this lowest group and divide the honors with handwork at approximately 4 per cent. In the third grade nature study receives 5 per cent of the time, with approximately the same for drawing and music. In other words, the child reads on an average over an hour a day in five hours of attendance at school in the first grade and is occupied with handwork for 11 minutes. He works arithmetic examples 16 minutes and sings 12 minutes. He spells 37 minutes, including phonic exercises, and draws 14 minutes. He devotes 25 minutes to language exercises and plays games 13 minutes.

In the second and third grades the proportion changes, especially with the subject of arithmetic, which assumes a new importance and is given a much larger amount of time. Some other subjects are also recognized as more and more important, but handwork remains at the foot of the ladder throughout the primary years and receives its paltry 11 minutes in all the grades alike.

ADJUSTING PRESENT CONDITIONS TO THE CHILD'S NEEDS.

By Ada Van Stone Harris, *Pittsburgh, Pa.*

When one is confronted with the problem of teaching the children of a great city one can readily understand why so much time must be put on the schedule for reading. The basic subject is English, and the oral language and spelling are the backbone of the work. In the cities we have children of all nationalities. English is the important thing for them to learn. No time allotment should be made until the third year. When you come to the actual working over of the day's time schedule you have another problem. I find that in the lower grades it is better to give more time to the school activity. It seems to me that we ought to make a scientific study of this in order to get at the bottom of it. We ought to know the relative importance of the subjects we are handling.

Everyone should be concerned in finding more practical educational material in the primary grades.

SPECIALISTS IN THE PRIMARY SCHOOL.

By Marie Anderson, *Port Arthur, Tex.*

A different kind of organization is needed to enable the primary schools to realize the full significance of the special activities which we usually designate as handwork, nature study, play, music, and

literature. We need a more efficient organization, so that all the time that is necessary may be secured for children's varied activities as well as for the more formal school work.

We need teachers of formal work and we need teachers of special work in our primary schools.

We need classrooms for our regular work, special environment for the special work, and playgrounds for the recreational activities. This is the day of specialization, and we need specialization in our primary schools as well as in the secondary schools, but not to the same extent. The subject matter in the primary school curriculum can be organized in larger units than in the secondary schools; for instance, one teacher can handle all of the regular subjects, another teacher all or part of the special subjects, with still another teacher to develop the recreational activities on the playground.

The right kind of organization will make this possible. It will also solve the problem of the teacher's latitude. If regular teachers are selected who know how to teach the formal work better than anything else, leave them alone to develop the work. If teachers of nature study and handwork are chosen who have specialized in those lines, give them all the latitude they need to develop that work. The same thing may be said of the other special subjects and playground activities.

When our whole primary school is organized properly there will be time for varied activities as well as time for the formal work. The teacher who is a specialist may have the privilege of developing her field unmolested and the children will get as much of all kinds of work as they individually need.

OPPORTUNITY FOR SELF-DEVELOPMENT.

By Miss Day, *Cincinnati University.*

I wonder whether we should organize our forces so that the child is under the supervision of the teacher every moment of the day or whether we should give the child an opportunity for self-development. It seems to me that at seat work children have the time to develop their own initiative. Sometimes the child begins to build by feet work instead of seat work. Give him a chance to use the mind that God has given him. Give him a chance for self-expression, and we shall not have so many troubles when we try to suppress him.

DEPARTMENTAL ORGANIZATION.

By Miss Metz, *Kirkwood, Mo.*

We are trying to organize our schools somewhat in the way suggested by Miss Anderson. One teacher is in charge of recitation work and another attends to drill work and hand work. After the

recitation work in reading I send the children to the other room for drill work and another group comes to me for a reading lesson. This makes the children progress faster. In the middle of the year we had two teachers to take charge of the recitation work and one to take charge of the drill work. Now we are planning to add a fourth teacher, to take charge of the music, art, and physical work. We have all of these activities going on at the same time. One teacher has a small group for intensive work in reading or some other subject, while another teacher supervises drill work and other seat work with a larger number of pupils. This seems a better plan than having the children sit in one room all day.

FREEDOM AND PROGRESS.

By Miss Day.

We tried an experiment with a first-grade class and allowed the children to do as they pleased. The teachers started with 18, but that number was later reduced. The children were allowed to come in the schoolroom and begin at whatever thing they wanted to do. Along two sides of the room, on the wall, were shelves. On one shelf was some clay that children could use and would enjoy playing with. A little farther along there was a work bench, saw, hammer, frame for sawing, and a little table. In another corner of the room were bookshelves, and so on throughout the room.

As to the method of reading, a little group came to the front of the room, where there were some pictures which had been separated from the rhymes belonging to them. Presently another group joined and all seated themselves in a semicircle. All were interested in the pictures and the lines describing them. They began fitting the lines to the proper pictures. The work went on, and not one of those children in the semicircle was distracted by the other sounds in the room. The success of this method was such that at the end of the year these children could read as well as most of the second-year pupils.

LATITUDE IN THE DETAILS OF METHOD.

By G. Ethel Walley, *Kansas City, Mo.*

A primary teacher should have great latitude in the detail of method, so that every child can be reached. To meet the needs of children of different ages, of varied experience, of all kinds of home environment, and the whole group, which varies from year to year, she must be allowed the greatest freedom.

The work in the primary grades deals with the mechanics of reading, of writing, and of number, in themselves very uninteresting. The quick automatic use of all the symbols of those subjects must be

acquired. To avoid a distaste for them and to create a desire for them the teacher should be allowed to change the time as well as method of procedure in teaching them. A great variety of games and drills must be used to meet the demand for activity natural to all children. Mechanical or inexperienced teachers can not reach each child, since they stay close to one method or text. The teacher must be larger than her text.

Originality, adaptability, appreciation of values and present needs and conditions, a keen interest in life and its need for full enjoyment at each stage of development are qualities absolutely necessary to all good teachers.

COOPERATION BETWEEN SUPERVISOR AND TEACHER.

By Miss Barnum, *New York City.*

I do not feel that the type of work that we should aim for in the primary department can come altogether from the supervisor or superintendent. The teacher must know the conditions under which she works and must know her children. She is there to teach the child, and I have a very strong feeling that the salvation of our schools must come from the classroom teachers. We need strong teachers who know what to do and who are free to use their judgment in matters of detail. In the past the plan has been to impose the program and course of study upon the teacher, who in turn has imposed these upon the children, endeavoring to get results which may "pass muster." If the work in our schools is to be properly adapted to the children, the classroom teacher must be responsible for it. She must constantly check up results and have the courage of her convictions to follow up and ask for changes that she feels are necessary. That she must work *with* those in the supervising positions, not *for* them. The supervisor must keep the perspective clear before the teacher; the teacher must keep the supervisor in close touch with the child's interest and point of view. It is an easy thing to sit in the office and make a course of study which considers everything excepting the child; it is the duty of the classroom teacher to keep the child's need constantly in the foreground

FREEDOM FOR PUPILS; RELAXATION FOR TEACHERS.

By Mr. Kerr, *Superintendent, Kirkwood, Mo.*

In our schools we have emphasized activity. Every boy and girl in the grades is given 30 minutes to play in the morning and 30 minutes' play in the afternoon during the school hours, under intelligent direction. There is freedom in the school both for the children and for the teachers. The boys and girls can go about the building with

exactly the same freedom you teachers have in this hotel. It is no sin if boys and girls talk to each other. If you make a rigid system where the boy and the girl are under a police system, there is no relaxation.

Every grade teacher has two periods of relaxation during the day. In the upper grades the teachers get three 30-minute periods for that purpose. As a result, we have better teachers. We are not doing that for the teachers only; we are doing it for the boys and girls, for by this plan we have a set of teachers who are at their best all the time.

The teachers themselves are allowed to work out their own plans of organization, the primary teachers as well as the upper-grade teachers. From the third grade to the fifth grade no lessons are assigned. The class coming into the room takes up the work where it was left at the last period. Each pupil is expectant and work proceeds with enthusiasm.

REORGANIZED TRAINING CLASSES.

By Miss Gage, *Western State Normal, Kalamazoo, Mich.*

At Western State Normal we have determined upon a forward movement which we believe will have important results. After this year we hope to make no distinction in the training of kindergarten and primary teachers. All who are preparing to teach little children will be given the same course, including both kindergarten activities and primary subjects.

THE DEMONSTRATION ROOM OF THE FIRST GRADE.[1]

By Mary K. Muller, *First Grade Critic Teacher, Fort Wayne (Ind.) Normal School.*

Our demonstration room was established in the first grade with the beginning, or 1B, children. Our first step was to set aside one corner of the room as a play corner. We placed a rug on the floor and soon the children had provided a toy piano, bed, dresser, cupboard, dishes,

[1] In the summer of 1916 a group of primary supervisors studying in New York met several times in conference and discussed ways and means of establishing progressive methods in public-school classes. They recommended that "demonstration rooms" be arranged for the purpose of adapting new methods to local conditions before incorporating them in the regular work.

Through these demonstration rooms it would be possible for teachers to observe the work and become familiar with new methods before attempting to use them. It was suggested that the teacher of the demonstration room be relieved from the requirements and obligations of the regular course of study in so far as they were in conflict with the methods tested. Methods proved successful in the demonstration room could then be adopted for general use without disturbance of normal conditions.

The National Council of Primary Education was asked to undertake the direction of this movement. The first demonstration room was established in Fort Wayne, Ind., under the direction of Miss Gail Calmerton.

hairs. These were all large enough for the children's use. 42 screwed-down desks and 30 little kindergarten chairs Twelve Moulthrop desks and two kindergarten tables led. After these arrived and the children were permitted they no longer cared to use the screwed-down desks ex- ace for materials. We had the desks removed and lockers e materials. This gave us room for games, to form a irs, or to work in groups in any part of the room. The e a chance to be normal children, and they are delighted angement.

It necessary to eliminate a time program with the excep- for work in the gymnasium, etc., which is fixed by the le of the building. We dismiss half of our class at 11 ainder at 11.30 in the morning, reversing the order from the afternoon. This gives us a chance for more individ-

the following program:

: (*a*) Playful activities: 1. Directed play by the teacher or chil- dancing; 3. Dramatization; 4. Music; 5. Apparatus work in the nd on the playground; 6. Other activities such as free play, games, structive activities: 1. Construction in wood, clay, textiles, paper, Sand-table work; 3. Picture making, drawing, painting, cutting. of expression: (*a*) English: 1. Conversation on, (1) daily activi- children, (2) interests of the children; 2. Stories, poems, and Reading; 4. Dramatization. (*b*) Music: 1. Singing of rote songs nes (especial care given to tone and daily work with monotones); ion of good music by the use of the Victrola, etc; 3. Rythm, i. e. dancing with music. (*c*) Applied number as the children need it rk, games, etc.

re experiences: (*a*) Daily observations; (*b*) Excursions; (*c*) Pets; ; (*e*) Gardens; (*f*) Hygiene and care of self.

ynote of our work has been real motivation. We have made k fill the need of the children as it came from them, by having essary materials ready and accessible at all times. We use the ng materials:

kboard on four sides of the room with crayon for drawing and writing.
er-color paints, crayons, and stick printing for illustrating, decorating, etc.
y for marbles, beads, dishes, and illustrating stories at sand table, etc.
per for books, paper folding of baskets, etc., free cutting for illustrating,
ng and dressing dolls, construction work, etc.
rdboard for construction work and printing.
aste and scissors.

Wood.—Type forms for b[illegible] es, etc. Van Arnam blocks—tongue-and-
ove construction for [illegible] ture, etc. Small pieces of wood of all
es and shapes—sc[illegible] al-training department, large spools,
mmers, dowls, an[illegible] s, furniture, etc.
Textiles.—Cotto[illegible] s and rugs. Seine cord for marble
gs. Eight-ply [illegible] ps, hats, muffs, scarves, etc., for do[illegible]

Cotton, wool, and silk scraps of all sorts provided by the children for making doll clothes after the pattern has been cut from paper to fit the doll. Materials of all sorts for making furnishings for beds, curtains, etc. Textiles of all sorts for making costumes used in dramatization.

Superior price marker for printing signs, tags, etc.

Superior type No. 17 used in making puzzles, books, etc.

Stamp-craft books, pictures, and reading puzzles.

Cuttings from magazines for illustrating stories and rhymes.

Sand table and one-fourth-inch sticks of various lengths for working out stories and incidents.

Needles, thimbles, and thread used in serving for dolls and houses.

To get the best results we found it necessary for the children to form a circle or group at the beginning of school in the morning and afternoon. As the children arrive in the room after 8.30 they have the perfect freedom, and work or play with that which is of most interest to them. At 9 o'clock, the beginning of school, the class is ready for the morning exercises, which consist of the prayer, Bible reading, songs, conversation on things of most interest to the children, stories, poems, etc., pertaining to the class and season. The children naturally divide themselves into three groups, according to ability, and the teacher works with one group at a time when she is not working with the entire class. While she works with one group, the rest of the class are permitted to do the work of most interest to them with materials in the room. No child must interfere with any other child in the room. To be successful there must be perfect democracy. Each must do his share in working for the good of all. If in any case a child interferes, that child is asked to sit quietly by until he learns how to work for the good of all. This is decided by the class.

After the children have finished their work, it is discussed by the class. They judge the work. The best is selected and the children whose work it is show how it was done. Where help is needed it is given. The teacher guides the children in the choice of work and materials suited to their mental development. The children are very eager to receive this help, as they realize why it is being given.

From a class of 38, 35 were promoted into the 1A in February. They had not only done much more work than any previous class had done, but the results were much better in every line. In addition to this the children have been happier and more enthusiastic than any other class I have ever taught.

REPORT OF THIRD ANNUAL MEETING, AT ATLANTIC CITY, N. J., FEBRUARY 26, 1918.

The meeting was called to order at 10 a. m. by the chairman, Ella Victoria Dobbs, assistant professor manual arts, University of Missouri.

TOPIC FOR DISCUSSION.

THE RELATIVE VALUE OF THE BETWEEN-RECITATION PERIOD.

To what extent—
- Shall its occupations be definitely outlined by the teacher?
- Shall it allow opportunity for projects initiated by the pupil?
- Shall it be filled with applications of the lesson just taught?
- Shall it be seat work or shall it allow projects which involve moving about the room?

What ideal shall dominate the work of the period?
- Is it necessary only that the pupils may be profitably occupied while the teacher gives attention to other groups; or
- Is a period of free activity of essential value in the child's development?

THE CHAIRMAN. This is our third birthday. We were organized in Cincinnati in an informal way, and more definitely at Detroit. Our purpose is to encourage a greater use of activities in the primary school, greater freedom of method for the teacher, and a closer cooperation between the work of the kindergarten and the primary school. We all know that there has been and still is a gap in many places between the work of the kindergarten and the primary school, and one of our great efforts is to overcome that uncomfortable situation. The way in which we hope to do that is not to make of the primary school an advanced kindergarten, but to carry over the good things of the kindergarten into the primary school.

We believe it is not well for little children of six to be set down in rows of wood and iron seats and bidden to fold their hands, face front, look at the teacher, wait for the teacher's direction, do nothing except as the teacher bids them, and reduce themselves as promptly as possible to a very close likeness to those wooden and iron seats in which they sit. In some of our modern schools we are getting a long way from this, but in many of our schools that condition still prevails.

I am happy to welcome the masculine element this morning, because I take it you are nearly all superintendents. Many times

when we have been discussing these questions among ourselves the remark has been made, "Oh, if only my superintendent were present to hear this. I believe all these things, but the trouble is to get him to move." Of course, the men who are here this morning are progressive people, who are moving already; but will you please take back the message to your less progressive brothers that a good primary school is not one in which you can hear a pin drop; it is not one in which the children are sitting in straight rows and minding the teacher all the time. Other elements enter in, and it is those elements that we want to talk about this morning.

Last year in our discussion it was suggested that a committee be appointed to study this very important between-recitation period. We have been at a little loss to know what to call this period. We have talked about "busy work," but long ago we discarded that term. It is not usable in polite society any more. "Seat work" will not do, either, because seat work means sitting still and doing what you are told to do, a very quiet, passive, sort of work. Finally, to cover the whole field, and to be sure to include all the elements that ought to enter, we have been calling it the "between-recitation period," which means all of the time in which the child is not actually taught very definitely by his teacher, and of that period we are to talk this morning.

There is one more feature of the primary council to which I would like to introduce you before the meeting begins. When we first organized we agreed that we should have no set program, but that we should come together for informal discussion. We felt that it would be good for us to exchange our opinions, one with the other, and in that way really come to know what we believe. Therefore, after a very brief introduction of these topics, the meeting will be open for general discussion.

Miss Faddis, of St. Paul, will take up the first division of the first question: "To what extent shall the occupations of the between-recitation period be outlined by the teacher?"

Miss Faddis. I am sure that those of us who read these questions and reflect upon their meaning will fall into a reminiscent state of mind and compare the past with the present. Then, as we view some of the achievements of modern education and compare them with our childhood experiences, it will make us feel that we want to go forward with an optimistic determination to spread the best things we know over a constantly increasing territory.

For several years I have been asking teachers, particularly those taking summer courses, to recall their childhood experiences with the materials about them that they have used in school and out of school. Some of these teachers have had no experience and others have had much. The purpose of these questions is, of course, to find

out what permanent impressions are made by the occupations that involve the head and heart and the valuation that the teachers put upon those occupations. In this way we hope to make it impossible for any teacher of children to say "Take the next lesson," or, "Work all the examples on the next two pages." We know that there are still many teachers who went to school 25, 30, 35, 40 years, and even more than a half century ago, who are requiring the children now in their charge, these boys and girls to do the same things that they did in their own childhood. They say they have no time for anything else.

In a recent report of the educational conditions in New York State, there is a statement that there are 3,000 teachers in the rural districts of that State who have never gone beyond the eighth grade, and have had no professional training whatever.

Here is another reason why the traditional practices hold; there could not be anything but traditional work with such teachers.

The old notion that the acquisition of book knowledge is the all important goal is still responsible for a great deal of drill for drill's sake, for reviews without a glimpse of a new view, and for depression in the name of discipline. We wonder how anyone who knows what education is can look into the faces of growing girls and boys and half read their thoughts, or see them outdoors at play, and be willing to "keep school." As a possible explanation of the tenacity with which old practices are held, I have often thought of what Hamilton Wright Mabie says in his talk on self-realization, that the majority of people in life use life as the artisan uses his tools, and only a small proportion use it in a creative way as the artist does. The artisan may be sincere and diligent and fairly skillful, but he is imitative, conventional, and devoid of creative power; while the artist is free and constructive, and he sees the higher possibilities in the material which he commands. He discerns new meanings and divines unexpected powers, and reveals fresh feeling, and he gives the familiar and the commonplace a substantial value by recombining it and reforming it.

Many teachers who believe that learning and doing go together have put forth great efforts to make their schoolrooms veritable laboratories in which the material and the tools used prove that experimentation has an important place in all of their plans. One of these wise teachers of first-grade children says that she wants her children to know that the world is full of interesting things to be done, and she wants them to be able to fill their time with good work without the what and when always coming from somebody else. This teacher, like a good many others, feels that she must give especial attention to the "between-recitation period" work in the first months of school life when manipulation of material and the

educational value of the mental activity are very important, because they are the beginning of the formation of habits for later study. This teacher and many others proved that applications abundant, numerous, and real, take the place of much drill.

A second-grade teacher who is in the habit of taking a good part of her recitation time to help the children determine what they shall do in the next period is apt to say to them, "I think you can do harder problems than we have done in class with the blocks." The blocks stay in sight and they visualize. They look at them and find out what problems they can make, and go up and move them if necessary. These children do unusual work in making their own problems. The blocks stand for different things that they have collected.

Another second-grade teacher says that children may have a good deal of choice in this work, and that they may do the tasks in the way that suits them. If there is an established standard in the room for seat work, and if the children are held responsible for everything they do, the children compare their results with each other and express their judgments with eagerness.

A third-grade teacher feels that much of the locational geography may be taught in an incidental way. The globe is there and the children locate any place in their reading lesson and in the stories they have heard. It is remarkable how much these children know about directions; usually they locate in relation to their own home environment.

It behooves us all to see what we can do to make a freer atmosphere. I went into a room a few years ago where the children were sitting in straight rows. I was examining the lower grades in phonics, and was giving exercises to test the children, or asking the teacher to do so. In this case the teacher thought the exercise would be more orthodox if she gave it, so she called the children up to the board, and when they were there in a straight row she told them to do just what they were told to do. Then she began using the phonic "im," and they said "grim, prim," etc., and then took their seats; I could not bear to leave the room without finding out whether these children could be anything but grim and prim, so I began to talk to them about the sounds I heard on my way to school that morning, and about the chickens. I did not have a sound of response when I asked them if they had chickens at home, and finally I said, "You know what chickens say, don't you?" There was no response, and the teacher said, "They do not; they have not been informed."

I want to ask all of you to encourage a freer atmosphere, to induce the teacher to think first of the children, and to realize that book learning is not the all-important thing, but that experience is most worth while.

MISS HANCKEL. When I looked at the first question I could not make up my mind to what extent stiffness and formality would follow if the teacher definitely outlines the occupations. Of course, I believe that she should let the children know definitely what they are going to do, or the children will definitely tell her what they are going to do; but I do not want it outlined so definitely that the children are not given some independence and freedom in what they are doing; and that suggests the second division of the topic; that is to say, the projects should be initiated by the pupils in 9 cases out of 10. I have found many teachers rather autocratic and no democracy at all in their schoolrooms. Such a teacher would have the board covered with figures, and the children would be set down either to study a lesson or else to manipulate those figures. I did not like that, but the poor teachers had no material for handling, so I said, "If we must have formal subjects, at least let us put a little liveliness in them." I said to the children, "You know what a table is, don't you? You know the second table and the fourth table?" and they answered, "Yes." I said, "Let me see if there is a child here who can arrange them five different ways." Those children began to take notice, and although I had thought only of writing them five different ways, the children themselves thought of 14 different ways of writing them. Before that they hated tables, but by such methods we have gotten them to teach themselves in formal subjects, and I think that is far more valuable than having the teacher drill them.

As to the projects, we are trying to get the young teachers to find out where they can find materials. For instance, if the window box from last year is somewhat stained, when the children look around in the springtime to see what they can do for the room, the project they choose may be the painting of those window boxes. It would never do, of course, to get paint all over themselves, so the children may then decide they must make aprons with which to cover themselves. We always have plenty of newspapers on hand, so the children may cut their own patterns. From the project comes the planning, done by the children, and the executing, done by the children, too. Then, when they get through we say, "Do you think that is a good apron?" and the children judge as to whether it will drop off or whether it will stick on; that leads to the invention of some remarkable fastenings. So I think that the project should be initiated by the children, and the children should be taught only where they show that they can not execute without some suggestion.

MISS BRADY. "Shall the period be filled with applications of the lesson just taught?" Filled? No; decidedly not. Not filled; but, "Shall there be any application of the work of the regular schoolroom?" Yes. In our large city schools, where in one room after

another you will find two groups of 25 to 30 children, making from 50 to 60 in a room, with one little teacher from 9 o'clock until 3.30, some things are apt to be done that are not ideal. But in spite of all this, there is opportunity for freedom and for the exercise of initiative; the seat-work period should not be filled by an assigned task. Time should be left, and considerable time left, for what we call the self-chosen task. There should be some of both.

It is common in primary schoolrooms to-day to find a class of children not reciting, but moving about the room, disturbing nobody. They have finished the work assigned by the teacher. You will find some at blackboards writing, drawing, and doing some work they choose to do in arithmetic, perhaps two working together or individuals may be working alone. You will find others at a shelf or table on which have been gathered a number of miscellaneous books, selecting the books to read and going off with them; two may be looking on together, disturbing nobody. You will find children in the lowest primary rooms going to a shelf on which have been gathered inexpensive toys—a doll, games, puzzles, or a printing outfit. Another group may be at the sand table. A number may be working with scissors and paste—about the only material most of us have—making things to use on the sand table or making furniture for a doll house. That kind of work gives opportunity for freedom and initiative.

We are not working under ideal conditions yet and we can not do yet all the things we know to be the ideal things.

The CHAIRMAN. When we first sent out our statement concerning the organization of the council and asked teachers over the country to express their opinions as to what work should be attempted, the first answer that came back was, "We are heartily in sympathy with the ideals of the council, but how can we have more activity in the primary school as long as we have such large numbers for one teacher? Will you not ask the primary council to speak long and loud for a reduction in the numbers of the children in first and second grade classes?" Will everybody please take that message home to the superintendent who is not here to-day and does not realize that because the children are little the teacher can not manage twice as many of them?

In sending out the outline for this discussion we asked, "If you can not be present, please send your answers to these questions to the chairman." One of the letters received began this way: "I have been teaching primary classes for 32 years. In all that time I have never had less than 50 pupils in my class and have often had over 60. If I had had an ideal enrollment, probably my methods would have been different."

I wonder if one of the things that we shall learn from the war will be the conservation of children and better care of them in the primary school, so that when we begin to discuss a question of this sort teacher after teacher will not have to say to us, "We are doing the best we can under the conditions." Is not this American Republic able to educate its little children? If we can raise millions and millions of dollars for making munitions and for the relief of our wounded soldiers, can we not make this need so plain to our people that they will find the money for it also?

"Shall it be seat work or shall it allow projects which involve moving about the room?" Of course, that question is closely connected with the number of pupils in the room. Miss Gail Calmerton, supervisor of primary and kindergarten education in Fort Wayne, Ind., will speak to us on this point.

Miss Calmerton. I hope that there are many principals here as well as superintendents, because the supervisor certainly needs partnership with the principal. A teacher can do much, but there is much more that she can not do unless she has the moral support of her principal as well as her supervisor and superintendent.

Why should the child not move about after he has completed his work? He might be at the board an entire period; he might be at the sand table; he might be out in his garden; he might be at the library table; or he might be in a play corner; but if he must stay there during an entire period he will not be able to use his initiative when he has completed the assignment. I think of the thrill that went through the United States when we heard that the first gun had been fired at the enemy, and in Indiana we were proud because it came from a red-headed gunner from South Bend. If the assignment for these gunners had been made as a lesson is assigned, that young man would probably not have fired the first gun. He used his initiative. The assignment was specific but in carrying out the assignment he had liberty of action.

I want to tell another story. One of our reporters who was in Europe when the war began said that, as he stood at the front and beheld that mass of German soldiers moving as one man down through Belgium, he looked at their faces, and saw that all seemed to have the same expression, like dumb, driven cattle. Then he said, "This blind, unthinking obedience has not come about in a day. This ability to move a mass of men like so many cattle has not come about in a day. We must look back to the German school to see the reason for it." We can not begin too young. We can not begin when a child is 14 to give him the habit of using initiative. Away down in the kindergarten is the time to begin, when we first have the children in school. The reporter said: "You know in

the German schools the knapsack (the school satchel) is strapped on the back of the child so that he will become accustomed to carrying that knapsack, and he feels very proud, because he is like his soldier father. Then when he goes to school, instead of playing pull-away and games of that kind in which initiative may be allowed, he simply marches a great deal of the free recess time under the direction of a man teacher."

Do we want our children to grow up and do the will of others? Why, a slave is a person who does the will of another. Poor Russia does not know what to do with her liberty. Why? Because she has never had liberty before. Individuals have never had it; they have had to stay put somewhere according to the direction of others. They have great love for liberty, but they do not know how to use it. They think that liberty is merely license. And that is the condition we must avoid in the schoolroom by giving our children a full measure of liberty and teaching them how to use it.

Everyone here, I think, has spoken about the great numbers in the primary room. Superintendents and college men are apt to feel that we can handle as large classes in the primary grades—even larger, they think—as in the upper grades. Now, the baby in arms has to be carried around by its mother. It requires constant attention. The little one of 2 or 3 requires somewhat less. When they get a little older they require still less attention; but the little children in the primary rooms can not button or lace a shoe; they can not make a knot. To say that we can teach as many or more in the primary grades as can be taught in the upper grades is beyond comprehension. We ought not to think for one minute that it can be done. Instead of herding our children in masses and putting 35 to 40 into one grade, we should remember that the younger a child is, the more help he needs.

To permit a child to use initiative does not mean that he is to be left to do just what he wants to do; that he is to run around aimlessly; that he is to be as noisy as he pleases; that he is to flit here and flit there like a butterfly, and grow up lacking in concentration. No; instead of a butterfly he should be like the busy bee. The bee is busy all day long. He has no time to waste. The boy who is a busy bee has no time to be noisy because he is interested, and when he does a thing he goes straight to the point. If he is going over to a table to get something, he makes a bee line there and he comes back. He has an object in view, and he is not aimlessly flitting and lacking in concentration.

If the child feels free, he will think less of the subject matter and more of what he wants to do. You know that Froebel soon found that his ideas could not be carried out in Prussia. The Prussian Gov-

ernment saw that any plan that allowed initiative in the children would never do in their military form of government, and Froebel had to go to Switzerland to work out his ideas.

Then another objectionable thing is uniformity. Everyone doing the same thing at the same time and in the same manner discourages leadership. What are we going to do to train for leadership? We should encourage departure from uniformity, instead of thinking that there is merit in it. The merit is not in uniformity, but in the system which allows liberty with a purpose, a goal.

The assignment, then, should be specific, so specific that every little one, no matter how slow his thinking, knows his purpose. The assignment need not be given by the teacher. Someone said that in 9 cases out of 10 it is worked out by the child, possibly with the teacher's help. But in working out this assignment there should be great freedom. Someone may want to work it out on the sand table; someone may want to do some work at the library table; and so on. It would depend upon the child.

A great danger, when we are trying to allow liberty, which is not license, comes in day dreaming. No one plan is sufficient always to avoid it. If we were trying to make machine operators, and if everything were to be the same day after day, we would need nothing but machine operators and one plan would answer. In giving an assignment to the children, in order that they may know what they are going to do, your assignment may be "Find the reading that you would like to do." Let them go over to a table and find the books that they would like. We are past the time when everybody must read the same book at the same time.

So I should say that the school is a busy hive of free little people, that the assignments should be specific, but in carrying out the assignments give as much liberty as practicable under our conditions, which are not ideal, but are working toward the ideal. If we never try progressive methods in unideal conditions, we shall never attain the ideal conditions.

Miss Leighton. May I have one minute to give the teachers a few words on what was said in Chicago. I am chairman of the committee on citizenship in elementary schools for the National Security League and have been released from the Passaic public schools by the board of education to help the teachers. I want to show that a primary-school teacher out West did something which Bainbridge Colby said is the most helpful thing any teacher has done for the Government. The teacher wrote on the board, "Our country needs ships," and the children themselves of their own initiative went to work. They made ships that day, they drew ships, they cut ships, they molded ships, and they went home with the thought to their

people that our country needs ships. When Mr. Colby heard that in Chicago he said, "Splendid; if the primary teachers could only take one thought at a time from the Government, emphasize that one day at a time, and let that message go out to our people, the little children would be helping the Government in the best possible way." I want to ask you teachers to let all your war work be constructive and not destructive. If we can help you in any way, call on the National Security League, which is helping the National Council for Defense, and we will give you all the material and all the help that we can possibly give. The last word is, *constructive work, not destructive war work.* No making of guns and that sort of thing, but the making of the things that are helpful.

THE CHAIRMAN. Not so very long ago a group of teachers were discussing this between-recitation period and the idea of busy work or seat work, and the question was asked, "Why do we have it?" "Oh, it is necessary." "Well, why is it necessary? Is it necessary for the teacher or is it necessary for the child?" "Oh, it is necessary because the teacher has so many things to do." And that seemed to be the idea. For that reason we have brought to you this question: "What ideal shall dominate the work of the period?" Is it necessary only that pupils shall be profitably occupied while the teacher gives attention to other groups, or is a period of free activity of essential value to the child's development?

MISS ANNIE E. MOORE (Teachers' College, New York City). I could not resist placing that word "only" in another position in this statement. As the topic reads it is this: "Is it necessary only that the pupils may be profitably occupied while the teacher gives attention to other groups?" I could not resist taking the "only" out and making it read this way: "Is it necessary that the pupils may be profitably occupied only while the teacher gives attention to other groups?"

I think we have a perfect right to inquire whether the children are always the most profitably occupied when the teacher is giving them her strict and undivided attention. I think also that we ought to ask always, not, "Are the children simply profitably occupied," but "Are they the most profitably occupied?" Now, with the free organization that we have heard so much about this morning, this matter of children choosing what they shall do implies a great deal of individuality. It implies that all the children may not be doing the same thing at the same time. Things look ragged when you go into a schoolroom and see here and there children who appear to be doing nothing. In my experience I have never gone into that sort of a schoolroom without occasionally seeing one or two children who were apparently wasting their time. That is, the children were not

doing anything very much. But you go into a schoolroom organized on the old plan, in which there was one group out with the teacher, apparently very closely concentrated upon the lesson in hand, the recitation, as we choose to call it; and you see other little children sitting quietly at the seats, all doing the same thing, and your snap judgment would be that those children were all profitably occupied. The probability is that in both groups there would be a considerable number of children who were not profitably occupied. It shows up more clearly in the free organization. You can spot the idle child more readily when children are busy in groups—some groups very busy, very much concentrated on what they are doing. I merely call attention to the fact that you must get down beneath the appearance of things to know whether the child is really doing anything that is worth while.

I went into a classroom of a teacher who is a very strong primary teacher, whose work is very much above the average standard; but she had the same difficulty that almost all primary teachers experience of keeping the children profitably occupied. In the group that was not working with her—and their exercise was one that was also above the average of the old type of seat work—there was one little boy who worked more rapidly than the other children and finished what had been given him to do. There was nothing else. The room was not equipped so the child could go and get something else that was profitable and interesting to do, and he got into mischief. The teacher turned to him and said, "Have you finished your work?"—the assignment; we have been speaking of assignments this morning. He said that he had. "Well," the teacher said, "it wouldn't hurt you to do it again, would it?" showing clearly that all she wanted was that the child keep busy, doing something, whether it was profitable to do it over again or not.

I think that Miss Dobbs has outlined the evolution in the topic that we have been working on for three years. She indicated an evolution in her statement of it. I think we must take another big step in that evolution and get rid of the idea of the between-recitation period. In the first place, we have too many periods, and we have entirely too many recitations. Our program is so chopped up that the child has not time to get started in anything that is profitable, either with the teacher or without the teacher, and to keep at it long enough to prove that he can do something in it. We must think more of the work of the day, we must think of it as a day's work, all of us together, sometimes working in small groups, sometimes working in large groups, sometimes working with the teacher, sometimes working without the teacher, sometimes one or two children working in the hall on something they are going to bring in after a while and do in the class; but

think of it as the day's work. Here again we are constantly appealing to the people in the audience who are not plain primary teachers. Here again the teacher needs help from a higher authority in the system in getting rid of this little chopped-up program, 10 minutes for this and 10 minutes for that, and 10 minutes for the next thing.

I have the utmost sympathy for the teacher who has the 50 or 60 children, and it is folly for us to recommend the same kind of organization for a primary classroom in which there are 50 or 60 children that we would recommend, and could say absolutely that it could be worked out successfully with a class of 25 or 30 children. But I do not believe that more than 1 out of 100 classroom teachers are doing the best that can be done even with the conditions as they are. We have said several times this morning that the teacher is doing the best she can. Doubtless individuals are, but there are many places in the country where even with a larger number of children than they ought ever to put into the hands of one teacher a different arrangement of the day's work would make it possible to give a great deal more of free activity.

A few weeks ago I was in southern California, and there, with that wonderful climate, that wonderful out of doors, those splendid school buildings—I have never seen such school buildings as they have in southern California—they are not using that out of doors. In fact, I found only a very few schools there in which they seemed to think it possible to turn a group of children into the open unless the teacher could go along with them. Let us get the idea of breaking up that class of 50 children into groups, some of whom might go out of doors and play if they could do no better. Let us get rid of the idea that they could not go out and work in the garden, could not go out and do something in the sand box out of doors, unless all went together with the teacher. We are not all doing the best we can with the conditions under which we are working.

This free period, it seems to me, is absolutely essential for the child's development. It is not merely a question of keeping him occupied, because it is during this free period that the child's own purposes have a chance to arise. Purposes can not arise, they can not come to the surface, unless there is a degree of freedom that will permit the child to use those materials in some way that is different from the way any one teacher would think of working out.

We can not work out exactly the best uses of clay for all of the children. I saw the other day in a first-grade room some of the most remarkable clay work I have ever seen. I would not believe three or four years ago, before this experimental work started, that first-grade children could do the work those children did. They worked individually, each on his own project. No teacher indicated

or assigned the work to be done with that clay, and wonderful things came out. I saw the children working, and I know exactly how they did it; it was absolutely their own conception and it was their work. As the finished work stood on the shelf, hardened with the beautiful colors the children had given it, it looked like majolica. It was artistic, creative work, and it was done because the children had had not 10 minutes or 15 minutes, but their periods out of recitation had been brought together so that they could have 50 minutes for that sort of thing. Consequently, more had been done and it had a unity and a variety about it that we do not see when the children all model the same thing. Out of that free period their plans and purposes had arisen.

It is only by having this free period that we can be sure that the children will be left alone for a little while. Even the teachers, who most earnestly desire to give the children an opportunity for better expression of themselves and more opportunity for their own individuality to arise, will acknowledge that it is often hard to restrain themselves from interfering when they ought not to interfere and to allow a child to go on working out his own little scheme. It is only by giving this longer period, in which the children may choose what they shall do, that we can provide for all types of children. All of you who have done advanced work in education know how great is the variation in individuals, and it is only by giving such opportunity that the various types and temperaments have a chance to assert themselves.

I visited a first-grade room a few days ago during the free period. The whole day was relatively free as compared to the old classroom organization, but this was the time when for 50 minutes the children were at liberty to choose what they would do. The room was well equipped with material from which to choose. It was provided with lockers, so that each child would know where to get his own materials and also the materials that belonged to the class as a whole. Two or three little girls were sitting at a table. One was finishing a charming little tea set which she had modeled. It was a project that had been going on for days with that child, until now she had four or five pieces finished, and she was coloring them. Another little girl was working on the typewriter, getting some captions ready for pictures that had been put on the wall. She was working on the typewriter for first-grade work, set with unusually large type. One little boy was working in his shop. He was off in a corner of the room where there was a workbench, and he worked for the whole 50 minutes. Another boy was coloring his cannon.

Three little boys were working on an aeroplane. It had been the conception of one of the children; the others had joined him. He

had started it at home and brought it to school. Different suggestions had been made until this aeroplane had reached marvelous proportions. The serious problem was how to get it to fly. Some of them had seen a marionette show a week or two before and conceived the idea of operating it by means of strings and wires, so they strung a pulley up in one corner and attached another pulley low down. The day before, it seemed, they had used some cruder method and there had been an accident. The aeroplane fell down and hit a little boy on the head. They decided then to have a danger sign, so when they started the aeroplane one little boy got a sign that said "Danger" and put it on a stick and stood with it in the most dangerous situation. The little girls working on their tea set were absolutely oblivious, except that when the boy came out with the danger sign they moved their table a little farther away and went on with their work.

Can you conceive of any greater activity than an aeroplane flight in a schoolroom? No reading was going on at this time, although it did occur later in the morning. The project itself would never have arisen if there had not been a free period. It was just in the day's work.

The word "ideal" is used here. What ideal shall dominate the work of the period? It seems to me that one of the ideals is the greater faith in the children. We have been afraid of our children. We have been afraid of little 6-year-olds; afraid to give them an opportunity to initiate things. We talk about it a great deal, but we are afraid to let them do it half the time.

Our ideal will be better equipment. We must have something more than sticks and shoe pegs and toothpicks and tablets and pencils in our classrooms. If it is going to be a workroom, we must have more things. It does not have to be extravagant equipment, either. We must remember that we are not only training for initiative and training for leadership; we are also training for cooperation. When we break up these artificial groups which we have formed we must lead the children into forming other groups for themselves, and they will do it.

Do you know how little freedom primary children have in our schools the country over? By actual time measurement it has been discovered that in 12 leading cities in this country the average time in 118 first grades when those children may speak freely in actual conversation, using language in the natural everyday fashion, is less than five minutes in two hours, and out of the 118, 79 have either absolutely not one minute for that kind of oral expression or have somewhere about two or three minutes for 40 or 50 children.

Miss Abbie Louise Day (Cleveland Heights, Ohio). I want to take up for a moment or two the impossibility of having free work

in our classrooms as they now exist. I was asked recently to inspect a small system of schools, to see what was needed. In room after room, from first grade to the eighth, there were as many seats screwed to the floor as could be screwed down and allow the children the number of square feet per child, the amount of fresh air, and the amount of light required by law. We have very beautiful buildings all over this country in which the only space left for children to move about is between the desks and perhaps a little up in front around the teacher's desk. There is no equipment, no wall cupboards down low to which the children can go and get material in the manner described by Miss Moore. There are no drop-leaf tables screwed to the walls. There is no opportunity for children to stand and work, because if they stand in the aisle they are in the way of children passing, and if they stand by the desk their legs are cramped. People who have been studying hygiene tell us that 6-year-old children should be on their feet from one-half to two-thirds of the time. What opportunity is there in the average first-grade room for children to be on their feet one-half of the time, except at the blackboard or in the aisles?

We have failed to realize that you and I are now uncomfortable from sitting in these chairs. I wonder how many of us enjoy sitting in the same sort of chair all day long and in the same place, with our hands folded. I should like you to try that for a little while. I have been with principal after principal and superintendent after superintendent whose ideal classroom is the rigid row. A whole row stands and sits properly, and the whole class turns, marches to the board, and hears, "Don't pick up a piece of chalk, Johnny, until I tell you." I have yet to find more than three men in the school business to whom the ideal of school order and school discipline and school activity is not just that state of affairs. That is true not of the men alone; it is so with most of the supervisors. They like to have a "nice-looking" school.

If we are going to give the children liberty, the first step is to give the teachers freedom. Our courses of study are dictated. Our time spaces and the study time given to the different subjects during the week are dictated. If there is anything more autocratic than a public-school system, I do not know what it is. The first thing we want to do is to get the teachers together. If you have a teacher who still wants to have children sitting in rows and rising and standing together, and you can not get her to see that things will be very much better if she will get into that classroom a real democratic spirit, then let her go on. You would not be democratic if you compel her to have a free school, and you are not democratic when you compel her to have the rigid school when she would like to have a free one.

A superintendent said to me: "Oh, the State law doesn't allow free desks, and it is against the fire laws to have movable furniture in the room." If it is the State law that children must be forced to sit in these seats fastened down in rows, it is time to call upon the legislature to change the law. It is not a very difficult thing.

I think everyone here has emphasized the difficulties of work with 60 children in a room. Last spring I was called upon to go to one of the schools in a large city to help a beginning teacher in the first grade. The teacher was not really doing anything. In the room were 60 foreign children, only about half of them able to speak the English language. There were seats for 40, and the rest sat on the floor, under the piano, everywhere they could be put. What teaching could the girl do? The only thing she could do was to keep them happy and out of a brawl, and that was about all.

A business man said to me not long ago: "Our schools are not doing anything for the children; they do not seem to have any common sense, and they can not do what they are told." Why is it? We have put them into rows of desks for eight years. When a boy must do any sort of work in a place where there are not rows of seats he does not feel at home, and he does not know what to do; and when he does not have somebody tell him just what to do, as the school-teacher has been telling him, he can not follow directions. Most of our teachers have become as mechanical as our desks. We must go back to our teachers' training schools for the reason. Go into the normal schools and city training schools, and you will find the students sitting in rows, learning something out of a book and reciting it to the teacher. We have a great many splendid places where that is not done, but it is generally so. Most of our teachers come to us trained to teach the children by saying: "Johnny, you learn this, and then I will see how well you have it." This is not a thing of the past; it is a thing of the present.

My principal aim right now is to get furniture of a new type and to get materials. You do not have to buy all of the materials. We can go out of doors, as Miss Moore indicated, but, instead, day after day we are seated on these benches inside because we disturb the grown-ups unless we do it in just that way.

THE CHAIRMAN. A few weeks ago a very fond aunt said to me, "I wish you would use your primary council to do something for the bright children. I hate to have my small nephew, who is an exceptionally bright little fellow, go to school and in a little while be slowed down to the pace of the average." It was just time then to send out the announcement of this meeting, so I wrote a circular letter and sent it with the announcement, asking what we were doing with the bright child and for the bright child. I am sure if there is

any child in the school that needs what we have been talking about, it is the bright child.

I asked a group of exceedingly good primary teachers what they were doing in this field. I said, "Isn't it true that you realize that you must promote at the end of the term a certain percentage of your class in order to keep your reputation? You realize that about 50 per cent of them can be dealt with in the average way; they will get the lessons from day to day. Another 25 per cent of them will get all you teach and more. They are the bright ones, who seem to learn things before you teach them. And then another 25 per cent are slower than the average, and you put your extra time on pulling up the laggards."

"Oh, yes," one of them said, "I never do anything for the bright ones. They will get up to the mark without any teaching at all. I never pay any attention to my bright children." Is that patriotic, is it democratic, is it human? Do we not need the best talents of the best children developed to their highest capacity just as much as we need to conserve all the energy that may be found in the subnormal children?

Miss Reynolds. A year or so ago there came into our school in September a little girl who had been in school one year before. In school she had patiently plowed through "The apple is red and the apple is green and the apple is good to eat." At home she was reading "Little Men," "Little Women," and books of that kind. Her mother brought her to school to see if we could give her a chance. We test the children who come in with a simple reading test. At the end of the second day the little girl went home and said, "They tried me in one group this morning and tried me in another group this afternoon, and I believe by to-morrow I shall be where I belong." It is encouraging to be where you belong; but if you have 50 or 60 children in a room, you can not find out where anybody belongs.

Miss Dunn (rural supervisor). I want to make a plea for the country child. I came to this meeting to-day because you were going to talk on what the child does when the teacher is not with him. Now, the primary child in the country school needs every one of these things that you have been discussing to-day. The first-grade child gets about one hour a day of teaching and he spends the rest of the time between 9 o'clock and 4 doing nothing, or doing busy work, which is the same thing. It is not impossible for the country child to be educated during all the six hours he is in school. The child comes to school to be educated, and we have not a right to pretend to educate him one hour out of that time and let the other five pass in stultifying him, because that is what it does. Exactly the same standards of efficiency, exactly the same standards of motive and

initiative and valuation should apply to that seat period or play period or free period as apply to the with-the-teacher period, and I want particularly to make an appeal for the provision for the country teacher of some material to make it possible for her to educate that child. A country school is usually one of the most barren of barren places. and because those children are thrown on their own resources five hours of the day out of the six they must have material which will stimulate them and lead them to develop projects of their own and to be educated six-sixths instead of one-sixth of their school life.

Dr. McMurry. The subject I would like to hear discussed has not been touched here this morning, although I have been intensely interested in all that has been said. I was not quite sure whether there was a 1-hour period or a 50-minute period, or a free period that was under discussion, or whether it was the question whether there should be a free period and then a period for recitation. My question is which of those two is the bigger thing to which the other should be subordinated. Shall the recitation periods exist? Shall the recitation periods themselves be changed by their contribution to these other periods or are the other periods rather a relief from what you expect as real educational effort? I am coming to believe that the ideal situation is illustrated pretty well by the country school. I am in sympathy with what Miss Dunn says. The country school by force relieves the child from the immediate pressure of the teacher. I believe we ought to learn to judge the success of our work as teachers by the purpose of the children the moment they are free from our immediate control. If they can take a period following the recitation period and see things to do, and also follow a plan of procedure which is the result of thought, then our work is likely to be good. And my particular point is, shall not our recitation period find its purposes in that other period, so that we shall be teaching and preparing all the time for that other work? The recitation is not the thing to be worked up to as a climax of all the efforts. The recitation is to be measured by the work of the students outside, and it shall play into that work outside all the time, finding its goal there, rather than the other situation, having the outside work find its goal in the recitation period.

The whole equipment of the school, in our modern conception of children, has not been sufficient. In the thought of the public in general the smaller the children are, the more they may be unequipped. That is the controlling thought all the time. Since suffrage has come to women I feel that the whole situation may be very rapidly modified. In New York City, where there are probably now 16,000 teachers, the women will appreciate the work of the 6-year old child more readily than the men, and if they will assert their right, I think the matter of equipment may be solved.

MRS. WHITE. I am not a teacher, but I was in my young days. I have sat through this conference with the utmost interest, and particularly that part of it which related to the care of the bright child. The reference which Dr. McMurry has just made to the New York voter has brought to my mind the bright child in the aspect in which the voter has taken that question to himself. Last fall I visited one of the three villages for the feeble-minded maintained by the State of New York. That village is remarkable for its equipment. There are 98 buildings, including a theater building, and beautiful homes with hardwood floors and victrolas and everything you can think of. The educational part of it is housed in the poorest buildings of the group, but it is a perfect system with everything that can be desired. Three hundred and sixty feeble-minded children are kept there until fairly into adult life. Think of a State spending millions of dollars for defectives when our children in the public schools are herded in with one teacher for 40, 50, or 60 children.

MISS MANN. It was just 12 years ago that I attended my first meeting of primary teachers at the State convention in Michigan, and exactly what has been said this morning was said at that time relative to the number of children in our classes. The teachers said: "If we could only impress on these school committees and the superintendent that the teacher can not provide busy work with 40, 50, and 60 children in the room." At that time the all-important problem was to provide that busy work which is now a crime. It seems to be a pity that 12 years later we must still be talking. I should like to know if two things can not be brought about. First, some kind of resolution emanating from this body that might reach the school committees directly. You can refer to the superintendents, but they are not the responsible parties. We need to reach the members of the school boards in some practical way, and we need to reach them with arguments from outside their local community. We require the help of such an organization as this.

MR. MERRIAM. If you do not think too badly of a mere superintendent, I should like to make a comment or two. I wish to emphasize Dr. McMurry's last remark and the remark from one of the teachers who spoke, namely, that perhaps men have not been considerate enough of children and that it would be a very good idea for the women primary teachers and supervisors to back up fully the recommendations of those venturesome superintendents who recommend new furniture, new equipment, and reduction in numbers instead of suffering in silence. I feel that very much can be accomplished, not wholly by a resolution, because resolutions are not taken to mean very much. Conventions are in the habit of making resolutions, but when they make them they have not discharged their

full function. A resolution is very good as crystallizing the sentiment, but it should be followed up. The last speaker suggested a resolution. Good. Follow up that resolution in all parts of the country by bringing pressure to bear upon the superintendent and the primary supervisor, who is usually a woman. And some of them need to have pressure brought to bear, for we learned from some one here that many primary supervisors like to see children in rows. Follow this matter up as to the numbers, as to equipment, and as to the following out of projects. I am very hopeful of this project method of teaching in the primary grades. I am very sure it is going to provide for the gifted child and for those not gifted.

Suggestion No. 2: If you have a room filled with seats screwed to the floor and you see no light at all, take out the middle row of seats across the room and that will give you an aisle 4 or 5 feet wide. Then if you have no place for cupboards around the sides of the room take soap boxes or any other boxes of that size and have the children paint them, put a little curtain in front and have those arranged next to the teacher's desk, and that will make a place to which children can easily go from all parts of the room to get materials or put them away. It will also add a great deal of space to the room for moving about, so that the pupils will not need to sit for so long. It can be done in any schoolroom no matter how crowded.

Lastly, one question. We learned from the supervisor from Missouri that there are from 50 to 60 pupils commonly in rooms there; from the supervisor from Fort Wayne that 35 to 40 pupils are perhaps too many. Miss Moore, of Teachers' College, intimated that 25 to 30 was about the number. I should be very much pleased to know what would be the opinion of some of the supervisors present as to the number of pupils in a first or second grade. Given the condition that the children have no language difficulty—that is, they are not foreign children—and are not backward, but in the average English-speaking first or second grade should the number be 25, 30, or 36? In my own school system I have absolutely limited the number to 36.

A Delegate. My first grades are limited to 25.

Mr. Merriam. Is my number too high?

(Several delegates answered, "Yes.")

Mr. Merriam. Of course, if you say "yes" we are confronted with difficulties as to the buildings.

A Delegate. Why do you take 36? Is it because it makes six rows with six seats in each row?

Mr. Merriam. Just as rapidly as I am able to do so, I am organizing first, second, and third grades with entirely movable furniture. In my new location, where I have been since the summer, I have suc-

ceeded in changing over three rooms only, but we shall have more than that before the year is out. If you say that 36 is too large a number, that would probably mean more building somewhere, and from the administrative standpoint, that is often a large problem. Oftentimes cities are limited in the amount they can expend, and personally I should rather see teachers' salaries go up, and have 36 in the first grades than to use that money to get more space somewhere and have 20 in the first grade.

If it is in order I should like to ask an expression of opinion as to the number. This society might perhaps have discussed it at some time, and there may be some information at hand.

A DELEGATE. Some of you may recall Col. Parker's answer to the question put to him by a teacher who was worried with 50 or 60 pupils. She asked, "Colonel, just how many children do you think a primary teacher ought to have?" He hesitated for a while and then he said, "Well, some ought not to have any." The colonel did not commit himself, and I am afraid we had better not commit ourselves unless we make it a minimum and maximum number.

DR. MCMURRY. I think there is a good chance for a good influence here. I think, instead of a recommendation passed by this body, a statement signed by persons who are well known all over the country would be the better method. If eight or ten persons who represent the various phases of interest here would sign their names to a definite recommendation, so that their opinions could be quoted, so that people throughout the country could write to them, if necessary, it would be a vital influence. The public is ignorant as to why it is so important.

I would suggest that the phrase that Miss Moore used, "A day's work," be taken—a day's work in a first grade, and in a second and in a third—and each case be worked out so that the real work that is ideal could be read with some illustration of the whole process that happens in one day in a first grade, where the equipment is proper. If that could be put into the hands of people here and there they would get the idea. It would probably be better than if it were offered in a logical manner.

A DELEGATE. Let me add to that, Miss Moore's experience contrasting the day's work under the present adverse conditions.

THE CHAIRMAN. Two committees were appointed to take immediate steps toward securing the information desired.

We are to have the pleasure of a few closing words from Mrs. Bradford, the president of the National Education Association.

MRS. BRADFORD. In regard to the particular question that has been under discussion, it seems to me that we can find an answer if we put to ourselves this question: Shall we continue to stress the "what and

how" of education at the expense of the "why," or shall we say, first, "Why?" and later "What and how?" In other words, we must come right down to fundamental grips with the reason that we have schools at all. We must come to a face-to-face conference with ourselves in reference to all phases of education in the present national crisis, as well as the fundamental purposes of education in a republic. We must ask ourselves, Why a public-school system at all? We know that a public-school system is to produce rounded human beings, with trained bodies and trained minds, and, as I believe, the instant obedience to that trained mind. There is something in here—you may call it the moral sense, you may call it the higher self, you may call it conscience. I like to call it the spark of the most high God that baptizes the body of each human being that comes into the world, making it the temple of the Holy Ghost. When we have the right kind of education this Nation shall be to the world the temple and spirit of love and the spirit of truth; and the spirit of truth shall work through free human beings, human beings who know the difference between mere liberty and actual freedom. In my own mind I always hold this distinction between liberty and freedom: Liberty is the absence of restraint; freedom is the power efficiently to do right. And that is the kind of thing that we want for our children in these free periods.

There can not be any question but that the free initiative in school is the one thing we must stress. We should always have stressed it, and more than ever now must we stress it, because there is just one organization that the Government of the United States found in this country last April through which the spirit of America, voiced by the Government of the United States, could reach every home in the land; and that organization was the 750,000 teachers and the 2,250,000 children in the schools. And that system must be taught through the free initiative of the children, through the spirit of cooperation among the children, through the spirit of selflessness in the children. That system must teach that the United States is to take the leadership in the rebuilding of civilization throughout the world. To that end we must have an educated citizenry, a citizenry each member of which can think straight, will want to work hard, will always play fair, and will love mightily.

Primary teachers, you have the biggest task of all. You have the fundamental task. You get the soul when it is plastic. The rest of us get it when it is hardened. I salute you as those who build the image of the Most High in the Nation through drawing out the Divine Spirit in the little children; and let all of us, State superintendents, county superintendents, and principals, realize that the schools do not exist for us at all. It seems ridiculous to have to say that, but it is necessary, for some of us seem to think the school

system is for the teacher or that it is for the superintendent. Let us set the little child in our midst, build our civilization around the child, guaranteeing to the child his right to the trained body and the trained mind, guaranteeing to the child the right to have his mind developed so that he can think straight, and his body so that he can work hard, and his spirit so that he may want to play fair, and his soul so that he will know how to love, and we need not fear for the things that will come after the war, because it will mean love throned upon law and real civilization coming as the sunrise from the bloody cloud of war that now stains the eastern sky.

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DEPARTMENT OF THE INTERIOR
BUREAU OF EDUCATION

BULLETIN, 1918, No. 27

RURAL-TEACHER PREPARATION IN STATE NORMAL SCHOOLS

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LETTER OF TRANSMITTAL.

DEPARTMENT OF THE INTERIOR,
BUREAU OF EDUCATION,
Washington, October 21, 1918.

SIR: The teacher is ever the most important factor in the school. As is the teacher, so is the school. The teacher makes the school, and, like every other creator, makes it in his own image and likeness. These adages are true of all teachers and schools, and are most true of the rural schools of the United States and their teachers. These schools have, as a rule, less adequate supervision than urban schools; they are less effectively organized and are more poorly equipped. Because of the simpler life of the country, the school represents a larger proportion of the educational agencies of the rural community than of the urban community. Personality counts for more in the country school than in the city school. As it becomes clearer that the work of the schools must be adjusted to the lives and experiences of the people they serve, it becomes more evident that the preparation of teachers for country schools must differ in some very important respects from that of teachers for the grades and special subjects in city schools. A recognition of this fact has caused many normal schools to provide special courses for rural teachers and special equipment for these courses.

In order that the officers and teachers of all normal schools may have a more comprehensive account of what is done for the preparation of teachers for rural schools in those normal schools which have established special departments and courses for such teachers, I asked Dr. Ernest Burnham, Director of the Department of Rural Education, Western State Normal School, Kalamazoo, Mich., to visit a number of these schools and, after personal inspection, to prepare a report on this subject for this bureau. I am transmitting this report for publication as a bulletin of the Bureau of Education.

Respectfully submitted.

P. P. CLAXTON,
Commissioner.

The Honorable the SECRETARY OF THE INTERIOR.

RURAL-TEACHER PREPARATION IN STATE NORMAL SCHOOLS.

INTRODUCTION.

PURPOSES OF THE STUDY.

This study of rural-teacher preparation in State normal schools is made for several purposes:

1. To make available as nearly as could be learned by the means at hand the actual facts of the situation in 1917 as a point of departure for later studies of this significant evolution in educational effort.

2. To afford a source to which boards of control, presidents, and faculties of normal schools may turn for constructive suggestions already tried out in use and others advanced by workers now at the task.

3. To enable leaders engaged in the work under discouraging circumstances to feel the total impact of effort at the solution of their problems and take heart.

4. To evaluate, in illustrations of vitality and results, the various ways in which State normal schools are now participating in the great national problem of preparing teachers for rural schools. Throughout the study source material is used when obtainable.

METHOD OF STUDY.

Previous studies of the subject have been read and ideas and facts have been summarized and incorporated in this manuscript as far as duplication was not involved. Data brought to hand by questionnaire have been correlated and either narrated or tabulated. Typical illustrations of curricula and administrative procedure have been secured from annual catalogues and in statements made ready for use here by the participants whose work is described. And personal observation made in nearly all the States together with constant individual correspondence have been made means of discovery and verification.

PART I.—DATA AND DISCUSSION.

LITERATURE OF THE SUBJECT.

Much local and some general discussion of the decreasing service of State normal schools to rural schools, with a growing public attitude of depression about the whole situation in rural education, led to action by the National Education Association at the annual session of 1895. The Committee of Twelve on Rural Schools was appointed. This committee was composed of several of the best students of education in America. Since the appearance of its report in 1897, there has been a sure foundation for an intelligent discussion of rural educational needs.

In reference to teachers, the Committee of Twelve said that normal schools were originally intended to prepare teachers of the rural common schools, but were doing little for these schools, and explained that entrance requirements had risen rapidly and thus set the normal schools too far ahead of those whom they were intended to serve; that many rural teachers could not afford the expense of two years in the normal schools; that salaries did not remunerate for such expense; and that attendance at normal schools is in inverse ratio to the distance between these schools and the homes, a fact especially true of short courses.

This committee suggested summer terms for rural teachers in every normal school in the United States and the use of agricultural colleges and high schools with model and practice rooms attached as supplementary sources. The Committee on Industrial Education in Schools for Rural Communities, 10 years later, added the suggestion that the compulsory introduction of industrial subjects must not outrun the preparation of teachers in such subjects.

A committee on rural education of the National Council of Education, which made a report in 1912, said: "It seems clear that it will be many years before the normal schools, if ever, will address themselves to the problem of preparing teachers for the rural schools." This was not an accurate forecast, in view of what the normal schools are already doing for rural teachers, as shown in this bulletin.

Papers related to the preparing of rural teachers have occurred with increasing frequency in the proceedings of the National Education Association for more than a quarter of a century. There has been great acceleration of this discussion in the past 10 years, as evidenced by an increase of approximately 400 per cent in the space given to it in the proceedings.

A study of the normal schools of the Mississippi Valley, which was reported in the normal-school section at the Chicago meeting of the National Education Association in 1912, assembled these facts:

Replies received from 42 normal schools showed that 27 had special courses for rural teachers; 2 were preparing such courses; 2 were not open, but would have such a course; 1 prepared supervisors only; and 10 had no special course. All but one reported inaugurating special courses between 1907 and 1912, inclusive; and 3 did not give the date. It is interesting to note that 17 of these schools established rural-school courses within the past two years (1910–1912).

In the normal-school section at the Oakland meeting of the National Education Association in 1915, a paper was presented on "A Decade of Progress in Training Rural Teachers," which gave the results of an attempt to compare what was being done for rural teachers in State normal schools in 1905 with similar efforts in 1915.

Twelve State departments of education out of 20 reported no special work for rural teachers in 1905, while 20 out of 21 States reported special efforts by their State normal schools to prepare rural teachers in 1915. Six out of 18 States had not advanced the minimum requirements for beginning teachers in 10 years; 4 out of 18 had advanced the certificate requirement academically; and 8 out of 18 States had added an entrance requirement of professional training. Twenty State departments of education showed a median estimate of 15 per cent of their rural teachers having had some professional training in 1905, and the same States estimated that 50 per cent of rural teachers had some professional training in 1915. A comparative study of several hundred State statutes on education passed in 1905 and a comparable number passed in 1915 showed a shift in emphasis from the certification to the preparation of rural teachers.

Out of 38 States reported, 29 offered special courses for rural teachers in their State normal schools and 9 did not; 3 began to differentiate courses for rural teachers before 1905, 6 between 1905 and 1910, and 20 had begun such differentiation since 1910, while 7 had begun in the current year. Twenty-eight States out of 35 reported that differentiation was increasing, while 29 out of 36 States offered evidence of a demand by local school authorities for specially prepared rural teachers. Seventeen of 36 States had normal-school courses for rural supervisors and superintendents in 1905, and 29 out of 36 States had such courses in 1915.

Following a closely analytical discussion of the whole matter, it was concluded that the last decade of progress in training rural teachers withstood two decisive tests of the stability of the advance made: There had been enough of the cumulative effect of growth to mark out a program for further advance, and in the human agents enlisted in the effort a mutually stimulating consciousness of kind

had developed which found clearing-house advantages in an annual meeting with the National Education Association Department of Superintendence.

"The National Society for the Study of Education published in its tenth, eleventh, and twelfth yearbooks (1911, 1912, 1913) three studies in rural education which carry many suggestions about the training of teachers: "The Rural School as a Community Center," "Agricultural Education in Secondary Schools," and "The Supervision of Rural Schools."

State and county education associations have assembled, in many cases, valuable local studies; and several of the independently endowed educational foundations have made excellent materials available. Much of the data and the suggestions presented in these studies has been utilized in the work of the national associations.

For many years the Bureau of Education has given, indirectly and directly, serious consideration to rural education. Circular of Information No. 6, 1884, was entitled "Rural Schools: Progress in the Past, Means of Improvement in the Future," and in this, as in later circulars, bulletins, and annual reports of the bureau discussing rural education, the preparation of teachers is considered.

The cumulative effect of National, State, and local interest in rural education found expression in a provision included in the legislative, executive, and judicial appropriation bill for the year ending June 30, 1912, approved on March 4, 1911. This congressional act provided the sum of $6,000 to be expended "for the investigation of rural education, industrial education, and school hygiene, including salaries."

The United States Commissioner of Education organized a Division of Rural Education, appointed workers in this division, and affiliated about 50 special collaborators to cooperate in keeping the division in touch with the best things done throughout the States. In the appropriation bill approved August 23, 1912, the amount allotted was increased from $6,000 to $15,000. Subsequent increases by Congress have been to $30,000, to $45,000, and to $50,000, and have enabled the commissioner to expand the personnel of the division, making possible more systematic and more thorough work.

The publications of the Division of Rural Education have been increasingly definite on the subject of teacher preparation for rural schools. Bulletin No. 2, 1913, "Training Courses for Rural Teachers," after an introductory discussion of the subject, gave illustrations of the work in typical normal schools, and reviewed the work of various States in training rural teachers in normal schools, and county and high-school training classes with especial emphasis on courses of study and statistics of attendance. In his letter transmitting this manuscript for publication, the Commissioner of Education said:

The improvement of the rural schools of the United States is, I believe, our most important school problem. The most important factor in their improvement must be better educated and better trained teachers. The education and training of teachers should always have some special reference to the work of the schools in which they are to teach. Therefore any intelligent attempt to adjust the courses of study and training in the normal schools to meet the special need of teachers in schools of the open country, villages, and small towns is worthy of careful study and wide publication.

Bulletin No. 8, 1913, discussed at length "The Status of Rural Education in the United States," and devoted pages 36–49, inclusive, to the rural teaching force. In this discussion the State normal schools were grouped in three classes: First, those which maintain that absolutely no difference should be made in the courses in preparation for rural school work from those for other schools, stating that the same course and same practice should fit for all elementary and intermediate schools; second, those which state that a difference should exist only in the character of the practice work; third, those which hold that the content of the courses as well as the character of the practice school should be different. Bulletin No. 1, 1912, "A Course of Study for the Preparation of Rural School Teachers in Nature Study, Elementary Agriculture, Sanitary Science, and Applied Chemistry," had recognized the differentiation of content of courses for rural teachers.

In Bulletin No. 49, 1914, "Efficiency and Preparation of Rural School Teachers," an analytical discussion of the efficiency of rural teachers now in the schools and suggestions of some of the things needed to professionalize rural teaching were followed by a statement of what the schools are doing for rural-teacher preparation, which was summarized thus:

Out of 121 normal schools reporting, 36 have distinct departments for rural teachers; 19 others offer special courses, although not equipped with distinct departments; 28 offer instruction in some subjects for rural teachers separate from the general courses; while 41 schools make no special provision for rural teachers whatever. It is a very suggestive fact that 57 normal schools are equipped to give instruction in agriculture. Some of the schools have large school farms or make use of portions of the school grounds for agricultural experiment purposes through gardening or experiment plats. The rural-school departments in many of the normal schools are reaching the rural population by means of an active extension service, through club work, rural-life conferences, rural surveys, and in other ways. A few of the schools report model rural schools erected upon their grounds, while others utilize one or more of the near-by rural schools for practice teaching.

The most recent publication of the bureau on the subject is Bulletin No. 31, 1917, "Rural-Teacher Preparation in County Training Schools and High Schools." This is a thoroughgoing study of the subject with a complete showing of the work of the States which are using secondary schools in preparing rural teachers. It is significant

that this work expanded between 1912 and 1917 as follows: Thirteen States, to 21; 654 schools, to 1,493; 8,412 students, to 27,111; and 4,848 graduates, to 16,626.

Beginning in 1914 and continuing to the present time, the Bureau of Education has held sectional and national conferences on "Teacher Training for Rural Schools" and other outstanding propositions in rural education. These conferences quicken the interest and intelligence of educational leaders in the localities where they are held and, by a wide radius of delegated attendance, the new ideas and purposes are carried into every State. The cumulative results of the Bureau of Education, wrought through the diversified activities of the Division of Rural Education, already exert a felt influence in Congress as well as throughout the Nation.

ADDED DATA PRESENTED.

The added data presented by this study will continue the sequence of studies already made, fitting in with the report of secondary school preparation of rural teachers summarized in a preceding paragraph. Following this report of the work done in State normal schools it would be interesting to have a study reporting the progress made in the instruction in rural education now undertaken by many colleges and universities.

The present state of knowledge of the details of enrollment and the graduation of students from courses for rural teachers in State normal schools rests upon voluntary reports of the data by the officials of these schools, and this year the conditions growing out of the war have very fully preoccupied the time of these officials, making a general response difficult to get. However, there is thought to be ample data in hand from special questionnaire reports and in annual catalogues to show the trend of effort.

In courtesies extended at the time of visitation to 50 normal schools in 40 States and in correspondence since great interest has been manifested in the subject studied and very generous cooperation is gratefully acknowledged. Lack of time and means to complete the visitation will account for many of the inadequacies of the result.

NORMAL-SCHOOL CATALOGUES REVIEWED.

Review of the file of State normal school catalogues for the current year in the Bureau of Education showed 140 schools giving special courses for rural teachers. Of this number 77 schools were shown to have departments of rural education in which the differentiated courses were administered and, in part, taught, while 63 had these special courses under general administration and taught in the departments to which the several subjects belonged.

The 140 courses all had from one to four subjects in education, which were designated: Rural education, rural-school problems, school management, method, and supervision. Six normal schools offer subjects in education especially intended to prepare teachers for the secondary school training classes for rural teachers, and at least one normal school offers special work for rural high-school teachers.

Industrial subjects, presented in the courses for the preparation of rural teachers, range from nature study, without modification, through many forms of statement, with agricultural nature study as a median, to agriculture. There is also a great variety of names for subjects in home economics, but some of this work and some of agriculture are given in practically every course for rural teachers. Manual training for rural teachers is given in a few schools, and in some cases a statement in detail of the content of this course is available, e. g., Cheney, Wash.

In 77 of the catalogues reviewed there was a subject described which realt with rural community welfare. This subject was named: Rural sociology, 50 times; rural life problems, 11 times; rural economics, 11 times; and rural sanitation, 5 times. The general body of material presented in this subject in the several normal schools varies chiefly in the placing of emphasis, as the names indicate.

Fifty normal schools, as far as information is at hand, are now differentiating practice teaching for rural teachers and for this purpose 130 rural schools are used, 124 of which are in the country and six are in buildings built for the purpose and located on normal-school campuses. In several cases where rural schools are not yet available, attempt is made to differentiate the work in the city practice schools to some extent for the rural teachers by organizing ungraded or multigraded rooms. Six normal schools are providing practice in rural schools though they make no differentiation of subjects for rural teachers.

Problems in the administration and supervision of rural practice schools are not yet, as a rule, successfully solved. The appreciation of the importance and difficulty of this situation is a sensitive point of progress at present. Further discussion, with illustration, will occur in Part II of this study.

The purpose of the other differentiations which have been named and numerically summarized is stated concisely in one of the normal-school catalogues, as follows:

> The subjects of study offered in this department may be briefly summarized in three groups: First, such as give a knowledge of children and of their organization, management, and instruction; second, such subjects as give power for localizing the curriculum in natural, industrial, and domestic illustrations

and applications; and third, a group of subjects intended to develop social intelligence and inspire purposes of participation and leadership in rural community life.

In normal schools having departments of rural education, subjects of the third group referred to are in most cases provided with laboratory work in seminar and club organizations which afford parliamentary practice, and some constructive social work is done.

In concluding this brief review of rural education as provided for prospective rural teachers in State normal schools, it may be well to specify and to illustrate the three groups in which the reader of their catalogues is prompted to classify them by their attitude toward rural education. These groups will be sufficiently defined by quotations from the catalogue of one school of each type for 1917.

First type: "There is a special demand for strong teachers in rural and village schools at fair salaries. Especially desired in this State's normal schools is the type of girl bred in the country, strong in physique, capable in intellect, assertive in personality, and of sound character, who will fit herself for modern, progressive rural school teaching."

Second type: "Rural school training is one of the most important parts of our work. We advise our graduates, with the possible exception of those who have taught several years before entering normal school, to teach at least one year in a country school; for here they face the problem of education in all its phases, and nowhere can the normal school graduate acquire a broader or more valuable experience. If she succeeds, she has no reason to fear the large town or city school." This is a State normal school in a State having 48 per cent of its population in rural life.

Third type: "It is axiomatic that a just and efficient government must and will be controlled by the educated; hence the genius of our government implies an educated citizenship. This attitude of the State toward the instruction of its people makes it the one competent agency in supplying qualified teachers for its schools. This the State does through its public normal schools, whose function is the preparation of teachers for the common schools of the State. The learning and training imparted by the State through its normal schools has not for its purpose the bettering of the condition of one class of persons at the public expense * * *; but for the benefit of the whole people, and its work is done with the general welfare always in view." These are indeed noble words from one of the greatest American normal schools in a State, 25 per cent of whose tax-paying property, approximately, is rural property, and approximately 40 per cent of whose people live in the country districts and small rural villages. A letter received within a year from the office of this normal school presents three significant facts:

"Approximately 25 per cent of our graduates will teach in country schools * * *. We make no special provision to prepare country teachers for their work. * * * Our graduates are very reluctant to go into the rural communities."

DATA ACCUMULATED BY QUESTIONNAIRE.

Questionnaires have been used, not as the best method, but as an available means, and some useful facts have been assembled in spite of the condition of extreme preoccupation forced upon normal school officials by imperative outside demands resulting from the war. It is greatly regretted that the specific facts are not inclusive enough to enable very significant tabular and graphic statements to be made as was originally planned. However, the data in hand will be concisely presented for what they are worth as sampling the whole situation.

1. NORMAL SCHOOLS HAVING DEPARTMENTS OF RURAL EDUCATION.

Fairly complete reports from 30 principals of normal schools which maintain departments of rural education show that 30 per cent of these departments were established before 1910; 30 per cent between 1910 and 1915; and 40 per cent since 1915. Four of these normal schools had special courses for several years before departments were organized. Statistics of enrollment and graduation for these departments are very meager. In the 10 schools making most complete reports, 542 men and 2,801 women were enrolled, and 191 men and 732 women completed the work. The figures for enrollment include summer school attendance in some cases and since in most schools students are, as yet, in rural education but one year, the figures for graduation approximate the full regular year enrollments in the departments of these 10 schools.

Eighty-five per cent of the graduates of the departments of rural education reported teach in rural schools at a minimum wage per month of less than $50 for 9 per cent of the number; $50 to $60 for 34 per cent, $60 to $70 for 40 per cent, $70 to $80 for 13 per cent, and over $80 for 4 per cent. The maximum wage after two years of teaching was reported to be $50 to $60 for 18 per cent, $60 to $70 for 9 per cent, $70 to $80 for 41 per cent, $80 to $90 for 14 per cent, and over $90 for 18 per cent. The figures show that the median beginning wage for graduates of the departments of rural education reported is in the neighborhood of $60 per month, and the median maximum wage received by them after two years of teaching is in the neighborhood of $75 per month.

Seventy per cent of the principals reported that school officials appreciate the special preparation of graduates of their rural educa-

tion departments, as positively evidenced by higher wages and definitely increasing demand; 3 per cent reported that no appreciation is noticeable; and 27 per cent were noncommittal. One said: "School boards want teachers who succeed in our rural training schools."

The minimum academic requirement for admission to normal-school departments of rural education was high-school graduation exclusively in 60 per cent of the schools reported; 23 per cent had established a course for rural teachers requiring high-school graduation for admission, while still offering courses open to secondary school students; and 17 per cent of the schools had only rural education courses of secondary rank. This suggests another sensitive point in the progress of this work, which will claim attention in Part II.

One-half the schools reported the highest requirements for graduation in rural departments carrying professional and academic recognition equal to the long-established and standardized courses. Where abbreviated courses in rural education are given they lead to poorly defined academic rating in many schools, but very definite professional recognition is given in most cases in the form of certificates which operate as legal licenses to teach in specified kinds of schools for periods which vary from one year to five years. In some cases these limited certificates are renewable without further normal-school attendance. In one State reported a life certificate is given after three years of successful practice to teachers of only secondary school preparation.

The popular understanding of the term "professional subjects" is groping after the scientific understanding of the expression, which is in transition. As reported by principals of normal schools, the term was usually interpreted to mean subjects in the education department of their schools, including practice. On this interpretation, 25 per cent reported one-fourth the total normal-school course given to professional subjects, 28 per cent gave one-third; 21 per cent, one-half; 8 per cent, three-fourths; and 18 per cent ranged from three-quarters to all. Possibly the wide distribution of suggested standard courses for normal schools which is in progress will tend to result in closer uniformity.

Fifty-five per cent of the normal schools reporting give rural teachers practice ranging from 1 week to 36 weeks in the graded practice school, and 64 per cent of the schools reporting give them practice in rural schools which ranges from 1 week to 24 weeks. In graded practice schools the range is: Practicing 36 weeks, 12 per cent; 24 weeks, 17 per cent; 18 weeks, 17 per cent; 12 weeks, 17 per cent; less than 12 weeks, 12 per cent; and not at all, 25 per cent. While in rural practice schools the range is: Practicing 24 weeks,

4 per cent; 18 weeks, 4 per cent; 12 weeks, 22 per cent; less than 12 weeks, 41 per cent; and not at all, 29 per cent.

One State normal school, Terre Haute, Ind., has a rural observation and practice school which has been in continuous use since 1902, but the use of rural schools for such a purpose has practically all developed since 1910, and most of it in the past five years. All the normal schools but one reporting practice in rural schools said that this practice is supervised; but observation finds both the practice and the supervision far from anything like standardization—in fact the whole effort is, in most places, only in its initial stages.

2. NORMAL SCHOOLS HAVING SPECIAL COURSES IN RURAL EDUCATION.

Principals of a comparable number (24) of State normal schools where special courses are given to prepare rural teachers, but having no departments of rural education organized, have reported. The facts presented in these reports have been summarized on exactly the same plan as the facts from principals of schools having departments of rural education, and the two sets of data will be presented for any value they may have as indicating which, if either, of these two ways of going at the preparation of rural teachers gets a better result.

Ninety-one per cent of these courses were instituted since 1910, while 30 per cent of the departments antedate that year, and this no doubt accounts in part for such disparity as results may show. The enrollment in the 10 normal schools without departments of rural education which made the best reports was only one-fourth of the number enrolled in the 10 schools having departments which made the best reports, and the graduations were about one-third as many in the former as in the latter schools. The percentage of graduates going from these courses to teach in rural schools was 71, while the percentage from schools having departments was 85. The minimum beginning wage per month for graduates of rural courses in these schools is in the neighborhood of $60, the same as in the schools having departments, while the median maximum wage of these schools after two years of teaching is $85, which is $10 per month more than graduates of schools having departments of rural education were reported to get.

It is likely that the higher academic requirements for entrance and the much smaller number of these schools which send out teachers with only secondary school preparation account for this better wage after experience. The question here turns on a choice by the normal schools between numbers and scholarship standards,

with choice by normal schools having departments of rural education tending, to some extent at least, to number of students; and the choice of the other normal schools offering rural courses tending, to some extent, to scholarship. This indicates another sensitive point of progress at present. Reports in hand show in both groups of normal schools under discussion a tendency to reach exclusively college standards as soon as the conditions dominant in their localities will permit.

No mentionable difference appears in the proportion of total time given to professional subjects in the two groups of normal schools, but there is an outstanding difference between the two in the amount of practice teaching afforded in rural schools. Sixty-four per cent of the normal schools having departments of rural education have provided practice teaching in rural schools, while only 33 per cent of the normal schools without departments have provided practice teaching in rural schools. In justice it should be added that whereas 50 per cent of the former group afford practice teaching in a graded training school, 60 per cent of the latter group afford such practice.

In this contrast no very positive result is discernible. In both groups of normal schools practice in rural schools, with a few exceptions, is very recent and the reports may be estimated in some cases; at any rate, the small numbers of normal schools reported in each group can not be handled to advantage in summary. However, this much can be said, the schools reported are widely distributed in location and the same items have been given, so that such statistics as are presented may have worth while significance.

3. NORMAL SCHOOLS HAVING LITTLE OR NO DIFFERENTIATION OF COURSES FOR RURAL TEACHERS.

Reports were received from 27 State normal schools which make less differentiation in their courses of study and practice teaching than the two groups already discussed, but only 10 of these reports show absolutely no attempt being made to give any special help to rural teachers. Reliable unofficial information from 2 of the 10 schools just referred to shows the work already begun by individual teachers.

The work done by this group of normal schools is so miscellaneous that summary is impossible. However, some splendid things are reported, and these are inserted here as valuable constructive suggestions. One principal says:

> We have no special course for rural school teachers; but, since about 50 per cent of our graduates go into rural schools, we give as much work as is possible in the regular normal course. We place emphasis on rural school problems and work in agriculture.

Another says:

We do send a great many of our graduates into the rural schools, and in order to prepare them for this work, they practice for about one-half their time in one of the rural practice schools connected with this institution.

At the Salem (Mass.) State Normal School there is no special department for training rural teachers, but the principal reports:

Some 10 years ago we established a rural training school which we have maintained for purposes of observation and practice. Probably an average of 40 students a year have had the opportunity to observe and to gain some experience under proper supervision in this school; usually these students of the senior class have been assigned to this school for a period of 5 weeks each. Until last year this was maintained as a one-room school; this year it is housed in a model two-room building with hall for use as a community center and facilities for instruction in the practical and the household arts.

There are some unique features in the work done for rural teachers at the Fitchburg (Mass.) State Normal School. Here a special course was organized in 1916, which consists of one year and three summer terms. Thirty-four women entered this course, and about 70 per cent of them went to teach in rural schools. There is no special teacher for this group, instruction being given by the regular teachers, and during the summer term work is offered in about two-thirds of the departments. No practice teaching is offered in this course, but after the students have attended one year and two summer terms they teach in a rural school for one year on salary, then they return for a summer of study and earn their diplomas.

The principal of the State Normal School at Keene, N. H., reports:

Every one of our graduates has to have training in all the grades. Many practice in our rural schools. All our school management, pedagogy, psychology, is studied from the rural standpoint. We have no separate rural course, as it is expected that any of our graduates may go into rural schools. We offer in the summer school a course in rural problems for the special benefit of teachers who have had no training at all. Girls who get intensive training in our rural practice school command excellent salaries.[1]

The principal of a State normal school in the West objects strenuously to the vocabulary used in the inquiry, but reports that one-third of a graduating class of more than 200 members went this year to teach in the country. He says that all students practice in what he is pleased to call "ungraded" schools 300 to 400 actual 60-minute hours, and that all practice the same length of time in urban schools.

The president of a normal school in a Southern State says:

As nearly 63 per cent of our population is rural, according to the census report, and as about 85 per cent of our people live from the farms, we have felt it our duty to send 85 per cent of our graduates back into the State to teach country children. This means that our whole course of study is built with a

[1] See p. 53 for an itemized statement of the practice teaching at Keene.

view to making good country-school teachers, as well as making efficient graded-school teachers. We require the completion of a four-year high-school course for admission and we give two years' normal training. We have a model school in the town and a three-room school in the country that we use for observation and practice purposes. Our country school is a real rural school, located in the country, surrounded with the spirit of country life.

In reporting from a State in the Southwest, the president of a normal school says:

In its present state of organization there is no strict line of demarcation existing between our department of rural education and the department of education in general. We offer courses in rural education and a number of students take these courses, but our State is new and there is at present too great a demand for trained teachers in the city and village schools to offer much encouragement to teachers to prepare specifically for rural school work. We realize that this is not as it should be, and we are doing what we can to overcome this tendency.

One principal reports that rural practice schools were established in 1904, that 50 per cent of the graduates go to teach in rural schools, and that two to four weeks' practice is afforded in rural schools, while there are 16 to 18 weeks' practice in urban schools. From another normal school no special work at the institution is reported, but a few girls who have taken the regular normal course are sent to teach in rural schools as a last resort. But even in this situation a rural school has been taken in charge, about 2½ miles away on the trolley line, and is considered a part of the practice school. This school has been reconstructed physically and put in charge of two good strong students, each taking it for a session a day. A young lady is sent two afternoons per week to give the children manual training work. The work at this school is under supervisors, and there are four who go out each week.

A principal reporting from the Northwest says:

This school has had no distinct department of rural education. I am happy to say that I have secured a special appropriation to be used to install such a department and we hope to have this department in operation in the near future. At present we are offering courses in rural-school methods and management and in rural sociology.

Reports from some normal schools in the South say that practically their whole function is to train rural teachers. One principal says:

There is little distinction between rural folk and village folk in our territory and but little desire on the part of school officers to secure teachers specially trained for either. There is no marked preference for highly trained teachers, the local girl usually having the preference, regardless of training.

Another normal school reports: "Trustees are ignorant; can not evaluate in matters of teacher training." In this latter school 80 per cent of the graduates teach in rural schools, and no subjects in

rural education are stressed. However, the report says that practice teaching in rural schools will be provided and properly supervised in 1918–19.

4. STATEMENTS FROM NORMAL SCHOOLS FOR NEGROES.

Since only a very limited file of reports from State normal schools for Negroes is at hand, the most complete single report is offered. The State Agricultural and Industrial Normal School for Negroes, at Nashville, Tenn., established special courses for rural teachers in 1912. In 1917 these courses enrolled 61 students, of whom 10 men and 27 women graduated, half of whom are teaching rural schools at wages ranging from a minimum of $40 to a maximum of $60 per month. High-school graduation is required for admission and two years of work given. Employing officers do give preference to graduates of these courses, and some graduates have been appointed by the Federal Government as agricultural demonstrators and district supervisors. One year of practice is afforded in graded training schools and three months of supervised observation in rural schools. The teacher of the education courses in the school just mentioned is an A. B. from Michigan University, and he has had graduate work at Harvard. He considers living among country people his best qualifying experience, and he anticipates better practice facilities in a model school building to be erected. He is attempting a thorough organization of the work and he has the sympathetic coöperation of the president and faculty of the institution.

At Tuskegee Normal and Industrial Institute a special course for rural teachers was organized in 1911. In 1917 there were 28 enrolled in this course, and 2 men and 23 women finished it. Here six weeks of practice teaching is afforded in rural schools. The teacher says that more academic work is needed, that there is an increasing interest and more sympathy toward rural education, and that he hopes for more inducements to get students into the course.

At Hampton Institute no courses are differentiated, but the preparatory work for rural teachers fits into rural life. Last year 14 men and 49 women finished the normal course, and over 80 per cent of them went to rural schools to teach. The demand for these graduates far exceeds the supply. The teacher of the education courses was prepared at the State normal school at Oswego, N. Y., and she has had varied teaching experience. She would like to have better scholastic preparation by the students, but says that this is a phase of the development and that "time makes right." The graduates are successful in community work, and with better communities there will be better qualified material for training.

5. WHAT IS DONE IN HAWAII.

The Territorial Normal and Training School, Honolulu, Hawaii, was organized to meet the needs of the rural teachers. In 1899 gardening, cooking, sewing, and woodwork were begun. In 1914 a diploma was granted special pupils. All pupils take the same subjects, selected pupils taking special work in the senior year. In 1917 there were 55 graduated with license to teach in rural and plantation schools. The salary for beginners is $720, and this usually is advanced to $840 after successful experience. In selecting teachers the employing officials give preference to these graduates to the extent of about $20 per month, and the reports of supervising principals show that they do better work than any other group of teachers.

Only juniors of the four-year course are admitted to the special training course, and eight periods per week for juniors and nine periods per week for seniors are given to professional work. There is practice teaching in graded training school one-third of each day for three years, and no practice is given in rural schools. A well-trained group of teachers is in charge of this work in Hawaii, and when adequate housing is supplied—addition of 16 rooms to the training school of 8 rooms—and additional land is available for building and gardening the institution will be better able to meet the demand for teachers of prevocational subjects which comes from all over the Territory.

6. REPLIES FROM HEADS OF DEPARTMENTS OF RURAL EDUCATION.

Seven questions were asked heads of departments of rural education and responses were received prior to this computation from 46 of the 77 normal schools which mentioned such a department in their catalogues. Answers to six of these questions have been assembled in a 4-column table, which follows; however, it is interesting to note the qualifications of this group of leaders in summary.

Academically, there was 1 doctor of philosophy; 17 have the master's degree; 19 the bachelor's degree; and 9 are normal-school graduates. Professionally, 19 have had graduate courses in education; 18 have had college courses in education; 1 has had summer school courses in education; and 8 have had normal-school courses in education. In reporting qualifying experiences, 12 mention farm life, 29 mention rural teaching, and 21 have been county supervisors. Other experiences specified as being of value are: Teaching agriculture, extension work, member State board of education, editing local newspaper, addressing rural audiences, and "One summer with State supervisor of rural schools, a real leader."

Summary of replies from heads of departments of rural education.

Qualifications.[1]	Obstacles.	Encouragements.	Prospects.
1. A. M. 2. University courses in education. 3. Farm life, rural teaching.	Lack of means for demonstration work.	Cooperation of my president. Increasing support from rural communities.	More demonstration and practice in rural schools. More high school graduates taking course (27 now, 10 last year).
1. Normal school 2. Normal school and professional reading. 3. Rural teaching.	Crowded course of study. No rural demonstration school.	Higher academic standard for entrance. Possibility of demonstration school.	To realize on my encouragements. Ungraded room in training school.
1. A. B. 2. University courses in education. 3. Rural teaching, county supervision.	Lack of funds for providing faculty.	All normal school faculty thoroughly converted. State waking up.	Funds for providing whatever is needed. Legislation.
1. A. B. 2. University courses in education. 3. Training school experience.	Poor knowledge of English.	Interest of students	Elimination of third grade certificate from State.
1. M. S. 2. Graduate courses in education. 3. Teaching agriculture, rural school extension work.	Lack of students	A good normal school. Special, well-equipped department.	
1. A. M. 2. Graduate courses in education. 3. Farm life, county supervision.	Sparse population, great distances, present attitude toward rural work.	Western spirit of progress and a clear field.	Establishment of demonstration schools. Vitalized course of study.
1. B. S. 2. University courses in education. 3. Rural teaching, special study.	Lack of rural school critic teachers who can use community material for schoolroom problems.	Efforts of teachers to bring new life into their teaching. Response of students to the ideal of larger service to a community.	Closer relation between the county superintendent, the teachers, and the normal school. Closer supervision of practice teaching. County health supervisor. Larger use of socialized school work.
1. A. M. 2. Graduate courses in education. 3. Rural teaching, special study.	Low wages. Lack of rural practice. Poor administrative scheme. Not enough differentiation of courses.	Success of well-trained teachers in rural schools. New practice and observation school in country.	Better transportation to rural practice schools. Two-year course for rural teachers. Better support for rural schools.
1. B. S. 2. Graduate courses in education. 3. Rural teaching, county supervision.	Lack of State program for rural education. Traditional city trend. Transition in rural life.	Progress made in two years. Awakening of rural people.	Rural teachers on par with city teachers in training. Recognized standard of satisfactory rural teaching. Enlarged extension service. Many more teachers training for rural service.
1. A. B. 2. College courses in education. 3. County supervision, member of State board of education.	Lack of interest in entering students. Faculty indifference.	More students asking for training for rural work.	Aim to have an assistant in my department.
1. Normal school plus 1½ years in university. 2. University courses in education. 3. Rural teaching, inspiration by normal school teachers.	Lack of funds for wider extension work.	Earnest interest of faculty, students and patrons.	Enlarged and stronger department. Better cooperation with outside. Addition of specially qualified instructors.
1. A. M. 2. Graduate courses in education. 3. Rural teaching under good supervision.	Lack of faith on the part of the administration. Lack of funds.	Educational progress makes it clear that all must enter this big field.	Study of near-by rural schools. Experimenting by sending few pupils to rural communities.
1. Ph. D. 2. Graduate courses in education. 3. Rural teaching, county supervision, editing local newspaper.	Tradition that teaching in town is promotion. Actual discomforts of rural schools.	Increasing demands for graduates. Higher academic preparation of entering students.	More definiteness in professional instruction. Adequate, supervised practice.

[1] 1. Academic preparation. 2. Professional preparation. 3. Experience.

Summary of replies from heads of departments of rural education—Continued.

Qualifications.	Obstacles.	Encouragements.	Prospects.
1. Normal school. 2. Educational courses in normal school. 3. Frequent addresses to rural and village audiences; 106 such addresses last year.	Too much teaching not directly related to rural school work.	Recent legislation. Certification, sanitation, social center.	A system of practice work with best country teachers.
1. M. S. 2. Graduate courses in education. 3. Farm life, rural teaching, county supervision.	City high school graduates entering are not preparing for rural teaching.	Administrative support of the department of rural education.	Placing rural and graded school courses on a par.
1. A. M. 2. Graduate courses in education. 3. Farm life, rural teaching.	Too much work outside of school work. Manage normal farm and dairy.	The progressive school laws of this State.	More emphasis on "educational agriculture." economic, social, and domestic rural problems.
1. A. B. 2. Normal school courses in education. 3. Rural teaching, county supervision.	Indifference of school officers and some faculty members.	County superintendents desire our graduates.	A practice school for students in this department.
1. A. B. 2. College courses in education. 3. Farm life, rural teaching.	Lack of popular interest in things practical and rural.	More serious-mindedness on the part of students.	Developed rural life and extension department.
1. Normal school. 2. College courses in education. 3. Farm life, rural teaching, county and town supervision.	No opportunity for observation and practice teaching in rural schools.	Swamped all the time by calls for more rural-trained teachers.	Growing interest. Planning to put in large auto van to get into more schools with large observation classes.
1. A. M. 2. Graduate courses in education. 3. Country bred.	Inability to get observation in rural schools where best methods are in practice.	The need for help felt by school boards.	School authorities over the State are asking for teachers equipped to teach agriculture and home economics.
1. Normal school. 2. Normal-school courses in education. 3. One summer with State supervisor of rural schools, a real leader.	Lack of permanency in population. Neither myself nor student teachers living in district.	Interest of community. Desire of students to teach in rural schools.	More land for working out agricultural problems.
1. A. M. 2. Graduate courses in education. 3. Rural teaching, principal of rural school.	Inability to get at the teachers in service.	Instituting a distinctive rural life department in our school.	Planning for apprentice practice in rural schools.
1. B. S. 2. Normal-school courses in education. 3. Rural teaching, county supervision.	Entrance requirements too low.	Number of high-school graduates preparing for rural work.	Better qualified teachers for rural schools.
1. Normal school. 2. University courses in education. 3. Rural teaching.	There are not sufficient practice schools to give adequate rural practice teaching.	Enthusiasm and right attitude of students. Reception of our people by rural boards.	More practice schools—one-room and consolidated.
1. B. S. 2. College courses in education. 3. Experimental work at teachers' college.	Untrained teachers in rural observation school.	The spirit of the community.	Working up the school and social cooperative spirit in a rural community.
1. B. S. 2. Normal-school courses in education. 3. Farm life, rural teaching, business with country people.	Indifference on the part of those in authority to the needs of the rural school.	The receptive attitude of the rural inhabitants. Fine results already obtained.	More and better practice teaching in rural setting. Two-year course to parallel that required of grade teachers.
1. A. M. 2. Graduate courses in education. 3. County supervision, extension work.	Inefficiency in present rural school organization and administration.	Basic significance of rural life to national welfare. It is our big educational problem.	War work is stimulating all to a larger appreciation of rural life, especially in production and conservation.
1. A. B. 2. College courses in education. 3. Rural teaching, county supervision.	Lack of enthusiastic support by administration.	Large classes of students who feel their need.	Supervising the student teachers in rural teaching.

Summary of replies from heads of departments of rural education—Continued.

Qualifications.	Obstacles.	Encouragements.	Prospects.
1. A. B. 2. University courses in education. 3. Rural teaching, grade teaching, study.	Lack of supervisors for rural practice teaching. Calls for experienced rural teachers.	Practice teaching in rural schools.	Preparation for rural club leaders. Rural extension courses.
1. A. M. 2. Graduate courses in education. 3. County supervision, inspector of high-school training classes, leader boys' and girls' clubs.	The economic and social conditions which have permitted the town and city schools to draw off the most capable and ambitious and best educated teachers, leaving the other kind for the schools that belong to the land.	We see signs that rural life is to be so reorganized and improved that it will be able to bid successfully for its fair share of the most capable individuals who go into the teaching profession.	The organization of more consolidated schools, which arouses a greater interest in educational affairs in rural communities and makes a definite demand from rural districts for better qualified teachers. Increase in township supervision and an increased willingness on the part of rural schools to pay a bigger price for a bigger teacher. Better living conditions in the country.
1. Ph. B. 2. University courses in education. 3. Rural teaching, county supervision.	Lack of appreciation of rural life by people and student body.	Better support and rising standards for rural schools.	My work here is too new to enable me to give a definite answer.
1. M. S. 2. Graduate courses in education. 3. County supervision.	The scarcity of students who are willing to train for rural work.	Success of our graduates and willingness of boards to remodel schools, furnish equipment, and pay good wages.	Increased interest of the people. We had four times as many requests for trained teachers last year as we could supply.
1. College, unfinished. 2. Summer school courses in education. 3. County supervision.	Wages are too low to induce preparation.	Recent legislation permitting State normal schools to issue certificates.	Many teachers will qualify for these new courses.
1. A. M. 2. Graduate courses in education. 3. Miscellaneous teaching, study.	Inability to get all concerned to size up the relative needs of rural and urban education.	Clearly seen growing interest in rural education.	Hope to advance the requirements as soon as conditions will warrant, i. e., the present crisis is passed.
1. A. B. 2. College courses in education. 3. Rural teaching, county supervision, home demonstration agent.	Too many students for all to get enough practice work in rural schools, and too short a time for courses in rural education.	Every girl in the college is required to take the course in rural education. Splendid preparation of students in industrial work. Desire of students to take schools and build them up.	Department is not two years old and 300 students are receiving instruction this year. Prospect for a model rural school for practice in the country in addition to 22 already in use. Enlarged extension work.
1. A. B. 2. College courses in education. 3. Rural teaching, special study of rural education.	Attempting to teach in normal school and supervise rural school with only student teachers at the same time.	Enthusiasm and earnestness of the girls who take up work in school.	Practical demonstration of use of course of study and organization as adapted to use of country schools.
1. A. M. 2. Graduate courses in education. 3. Rural teaching, study of rural schools generally throughout State.	City-mindedness and lack of real interest in country life. County and educational associations are dominated by city educational workers.	Increased prices for produce tend to keep more people in the country. Growing consciousness of necessity of farm success.	Legal requirement of one year for all teachers and better courses, on par with courses for city teachers will get more students into rural courses. Better salaries.
1. Normal school. 2. Normal school courses in education. 3. County supervision.	Lack of funds to take care of the special needs of rural students. Immature students.	Plan to give greater recognition to rural department.	Hope that legislature will act on recommendations of State survey commission.
1. College unfinished. 2. University courses in education. 3. County supervision.	Inability to get sufficient practice teaching.	More high school graduates enrolled. Longer course for eighth grade graduates.	Nothing at present.
1. B. S. 2. University courses in education. 3. Farm life, rural and village teaching.	Desire for city life by both pupils and teachers.	State department of education is creating more inducements to prepare.	Students begin to see calling in rural teaching.

Summary of replies from heads of departments of rural education—Continued.

Qualifications.	Obstacles.	Encouragements.	Prospects.
1. A. M. 2. Graduate courses in education. 3. Farm life, rural teaching, county supervision. Graduate work in agricultural college.	Difficulty of keeping city school methods from dominating; lengthening the time of preparation: getting better conditions for teaching in the country.	President of normal school is awake, also State superintendent. More students inclining to rural teaching.	Two-year course for high-school graduates taken by more students. Better supervision of rural practice teaching. Extension lectures in rural communities.
1. A. B. 2. Normal school courses in education. 3. Rural teaching, actual contact with rural needs.	Lack of teachers and lack of funds.	Progress of schools used as training schools. The greatly improved quality of work done by students who have had the work. The enthusiasm of students for the work.	Greatly increased number in regular course for rural teachers. Rapid increase of extension classes.
1. A. M. 2. Graduate courses in education. 3. Rural teaching, extension work.	Failure of faculty to appreciate the demand for trained rural teachers, hence few students in college courses.	Growing demand by school directors with willingness to pay adequate salary.	Active propaganda in localities able to support good schools. Demonstration schools thus secured used for observation. Creation of an effective demand so that strongest students (majority are from the farm) will go into rural education.
1. A. B. 2. University courses in education. 3. County and city supervision.	Our course, 10½ months, is too short.	The success of our students in their later teaching.	Three-year courses. Hope to get a rural school as a practice school.
1. A. M. 2. Graduate courses in education. 3. Farm life, rural teaching, county supervision, year's contact with F. McMurry.	Lack of funds for transportation, extension work, and advertising.	A new president thoroughly devoted to rural work. We have begun and have done something.	Students entering rural courses. Other rural schools seeking affiliation. Extension work.

The foregoing replies have been kept, as nearly as space would permit, in the exact original language. It is observable that in spite of wide variation in personality and in location there is, after all, a close similarity in needs, in efforts, and, generally, in spirit. Many of these leaders are severely handicapped by the lack of appreciation of what they are trying to do by the administration authorities employing them, which results in their being loaded with too many other important responsibilities at the same time.

7. REPLIES FROM TEACHERS OF RURAL EDUCATION COURSES.

Eighteen teachers of rural courses in normal schools where special departments have not been organized sent replies to the personal questions. In this number there were two doctors of philosophy, nine having the master's degree, six having the bachelor's degree, and one normal-school graduate. Professionally, nine have had graduate courses in education, five have had college courses in education, two have had educational courses in summer school, and two have had normal-school courses in education.

This group is made up chiefly of the heads of departments of education, with the work in rural education as a minor part of their

work in most cases. In reporting qualifying experiences six mention farm life, six mention rural teaching, and two have been county supervisors.

Summary of replies from teachers of rural education courses.

Qualifications.[1]	Obstacles.	Encouragements.	Prospects.
1. A. M. 2. Graduate courses in education. 3. Farm life, rural teaching.	Antipathy of present teachers toward "extra work" as they call it.	Genuine interest of students and willingness to pioneer in bigger rural work.	Additional courses to train leaders in organizing rural welfare movements.
1. A. M. 2. Graduate courses in education. 3. Rural teaching, principal of rural high school.	A rigid course of study adopted by all normal schools of the State.	An attempt on the part of the State to organize rural courses.	
1. Ph. D. 2. Graduate courses in education. 3. Farm life.	Brevity of service of girl teachers in rural schools.	.....	Community schoolhouse and farm is the ideal.
1. A. M. 2. Graduate courses in education. 3. Variety of teaching positions.	Normal students not interested in rural education.	Feeling that open country is the field of greatest educational need.	Gradual education of rural people by current urgent stimulation of improvement.
1. B. L. 2. University courses in education. 3. Supervision.	.....	Graduates in service rated higher than those of any other school sending teachers into State.	More money. Three-year, possibly four-year, curriculum.
1. A. M. 2. Graduate courses in education. 3. Teaching and graduate work.	Lack of adequate facilities. Taboo on "Rural."	Some graduates last year went to one-room schools for nine months at $60.	Opportunity for social service.
1. A. M. 2. Graduate courses in education. 3. Teaching in various schools.	No model rural school...	The success of our students.	Supervised observation in rural schools.
1. B. S. 2. University courses in education. 3. Farm life, rural teaching.	Lack of appreciation of rural needs.	Some graduates look upon rural education as a life work.	More students anticipate rural work.
1. Normal college. 2. University courses in education. 3. Rural teaching, supervision.	Remoteness of typical rural schools. Financial adjustment of traveling expenses of students, difficult.	The interest of students in their work of preparation.	Possible cooperation of towns in paying students' expenses for aid rendered by students.
1. M. S. 2. Summer school courses in education. 3. Present position.	Course was not required.	Course now made obligatory.	Cooperation in home-gardening campaign.
1. B. S. 2. Normal school courses in education. 3. Teaching in various schools.	Small salaries to prepared men.	Better equipment and an agriculture building.	Interest by students. Vocational work. Extension work. Demand for agriculture.
1. A. M. 2. Graduate courses in education. . Farm life, study of education.	Importance of agricultural work as a vitalizing force in education not recognized, resulting in archaic curriculum.	I am allowed to work in my own way as long as it does not cost anything.	None, until the whole State system is reorganized. Farm bureau work is gradually arousing interest.
1. A. B. 2. University courses in education. 3. Trial and success in teaching.	Too much work. Too many duties. No separate rural department.	General upward trend in education. New department of agriculture gives impetus to to rural work.	New community course promises to be popular and helpful.
1. B. S. 2. University courses in education. 3. Farm life, rural teaching.			

[1] 1. Academic preparation. 2. Professional preparation. 3. Experience.

Summary of replies from teachers of rural education courses—Continued.

Qualifications.	Obstacles.	Encouragements.	Prospects.
1. A. B. 2. Summer school courses in education. 3. Rural teaching, city training school.	Lack of supervision of graduates for first two or three years of teaching.	Tendencies toward cooperation between urban and rural school systems. This means improved organization, supervision, standards, initiative in teachers.	Definite aims and standards of teaching. Better organized courses of study based on surveys, tests of abilities, psychology and sociology.
1. A. M. 2. Graduate courses in education. 3. Field work as State school examiner.	Lack of ability to articulate the work at school and in the field.	Graduates teach principally in rural schools. Great response to rural courses.	Forward steps along line of food courses to meet present national crisis.
1. Ph. D. 2. Graduate courses in education. 3. Farm life, rural teaching.	All students must take nearly the same course—no recognition for special rural training.	Those who caught the spirit of the special classes in rural education seem to be greatly encouraged.	Nothing definite till the normal schools of the State organize rural courses and grant diplomas for same.

Both of these groups of teachers were asked to make statements supplementary to the current catalogues of their institutions. These replies, not included in the foregoing summaries, were mostly incidental, but some of them indicate work added since the catalogues were printed, as a few quotations will show: "Students shy at word 'rural.' If rural education is given it must not be so entitled." "This normal school dedicated a $4,000 model rural-school building in 1917. Rural-school teaching is demonstrated here by a specialist with farm children." "Have pigs and chickens and farm four and one-half acres. All handwork done by students." "Hope to have special teacher of rural education by September, 1918." "Would include more time for observation and practice." "There is current an effort to revise and unify rural courses in the normal schools of this State." "We have added postgraduate courses for teachers of high-school training classes and for county superintendents." "Elective courses for home-demonstration agents are taken this year by 45 girls. There is laboratory work in food conservation with theory of club management." "We have a new model rural-school building." "We have affiliated rural school for demonstration open during the summer term."

8. RURAL PRACTICE WITHOUT DIFFERENTIATED COURSES.

Several instances have already been presented of normal schools where provision is made for practice teaching in rural schools without any differentiation of courses of study. One of the best and, in so far as available evidence goes, the earliest established rural practice school which has continued in uninterrupted use is at Terre Haute, Ind. The present director of the work has furnished the facts. The annual report of the State normal school for the fiscal

year ending October 31, 1902, during the summer of which year the rural training school was established, says:

Quite a number of graduates have obtained positions in the country schools after graduation, and many of the undergraduates have taught for a considerable period in the country schools after taking a portion of the course in the Indiana State Normal School. In addition to this, almost all of both classes have received much of their education in the rural schools. They have, therefore, become accustomed to the meager equipments, to the frequent changes of teachers, to the inexpensive papering and painting by unskillful workmen, to the general lack of repairs, and to the neglect as to coal houses, outbuildings, etc., which are only too common in the rural schools of the State. In consequence it has long been felt that the Indiana State Normal School would more adequately fulfill its service to the State by establishing a rural-training school in order to give to the students of the school an opportunity to observe and to practice systematically in such school, and thereby to become acquainted with the peculiar difficulties, as well as the peculiar advantages, belonging to such a school; and to make, in addition, a study of the rural-school problem as a whole.

As a result of these considerations, arrangements for such a school were completed during the summer of this year (1902), and at the beginning of the school year in September a rural training school was organized and is now in successful operation. The school selected is not a village or town school, but essentially a typical country school, presenting the usual peculiarities and difficulties of such a school. It is school No. 6, at Chamberlain's Crossing, in Lost Creek Township. It is situated 6 miles east of Terre Haute, on the interurban line between Terre Haute and Brazil. The agreement was entered into between the board of the Indiana State Normal School, as party of the first part, and Joseph Ripley, trustee of Lost Creek Township, as the party of the second part. It provides that school No. 6, situated as above noted, shall be used by the students of the Indiana State Normal School as an observation and practice school. It also provides that repairs, improvements, apparatus, etc., beyond those usually provided by the trustee for the country schools, shall be paid for jointly by the trustee and the normal-school board. A further provision is that the teacher during the seven months of the school year (the period during which the schools of the township continue) shall be paid the maximum salary by the trustee, and a certain fixed amount in addition by the board of the Indiana State Normal School, and that during the continuance of the school beyond the seven months, so as to complete the period of 10 months, the teacher shall be paid by the board of the Indiana State Normal School. The compensation for the janitor is also, according to the agreement, to be provided for by the State normal-school board.

Continuing, he says:

In answer to your second question, I find that there is no available record from which I can readily ascertain the number of persons who have made use of the rural training school. Since its founding, however, taking all factors into consideration, it is safe to say that the number of persons would not vary perceptibly from the total number of graduates during these years; and, after making some computations, I feel safe in saying that not less than 1,500 people have been graduated from the school since 1902. No doubt, you are aware that quite a large number of teachers other than students of the normal school visit the rural training school and some use has been made of it for observation purposes. Practically every student, who completes the

course here, spends some time—not less than a week—in this school and during such times the students teach a daily lesson.

In this school, as in others of the same type visited, one of the outstanding features was the absence of lost time, and the feeling that the school in all of its several grades was a going concern. There was the lilt and joy of conscious achievement. The slack was all taken up and the situation was capitalized for all its teaching capacity. There seemed to be no special objection to the pupils enjoying themselves while gradually growing into the conventions of organized society. The intelligence of the children was respected; and, having been given interesting work to do, they were trusted to do it. The purpose seemed to be to let the child feel his intelligence growing, to start a worth-while sequence of effort on the part of the child and to keep it up with happy fidelity, trusting Mother Nature to perform her function of growth.

9. CAMPUS AND AFFILIATED RURAL SCHOOLS.

In six, and probably more, campus-practice rural schools and in a number now approximating 130 affiliated practice schools in rural districts, the normal schools having organized departments of rural education or special rural courses, are providing practice teaching. This is a difficult task and, because of physical inconvenience, it is likely to be expensive; certainly this will be true of the initial stages of the effort.

The physical equipment will presently be as good as the elaborate buildings put up on the campuses for urban practice schools by the States. And certainly there can be no reason why, in providing teachers for these rural practice schools, there should not be at least equal money invested in salary and at least equal care exercised in selecting the teachers and in providing supervision. Visitors to some of the rural practice schools, now provided by normal schools, might well be disheartened, except for the fact that the work is in its initial stages. Interest may be expected to develop with increasing intelligence on the part of normal-school officials.

Several normal schools which have campus buildings for rural practice teaching have also affiliated outlying rural schools. One of the earliest, and probably the first campus rural-school building was erected by the normal school at Kirksville, Mo. The facts about this building, the expansion of the work done in it, as well as the facts about the extension of activities beyond the campus are concisely stated by the present director of the work as follows:

This building was originally built as a demonstration of what at that time (12 or 15 years ago) were advanced ideas in rural school architecture. Then it was thought that school boards and teachers needed a demonstration of teaching work as well as architecture; so an expert teacher was engaged and

children were brought in from the country. It has always been a truly rural school. No town child need apply. At that time it was also a demonstration of the practicability of transportation over Missouri dirt roads. Now, with our 140 consolidated schools in Missouri, there are many demonstrations of the practicability of transportation of pupils. The rural school is now used as a demonstration for our pupils in rural education. A few each quarter do a limited amount of practice work over there. Some, however, use it only in observation, as there is not enough work to go around. The school building is a social center, even though in a small city. A flourishing grange meets there every two weeks, and the farmers for 6 or 8 miles out come in. Every quarter students join the grange. Then they go out and organize granges in their own communities. The Rural Sociology Club meets in the rural school every other week, so you can see it is lending its influence toward the idea of a wider use of the rural school plant. Last summer the grange used the building during vacation as a canning plant, and put up several thousand tins of fruit and vegetables.

Now, as to the outlying affiliated rural school: The children are brought in by means of our big Packard truck every Friday and take special lessons in the newer things in education, such as music, drawing, manual training, sewing, and the like. The enthusiasm the children and patrons of this affiliated school acquire is communicated to the patrons in their own districts. They have a farmers' club, a literary society, a dramatic club, and an orchestra. We believe this plan has some advantages over the one of sending critic teachers out to outlying schools. They get in contact with big and interesting things on our campus and carry out their ideas in their own communities. Next year we expect to have several affiliated schools.

A combination use of campus and affiliated rural practice schools is well illustrated by the Chico (Cal.) Normal School. One of the directors of this work reports it as follows:

Our students are required to teach throughout the entire senior year. Each student spends two weeks in observing and teaching in the standard one-room school on the campus. In addition to this we are now sending students to 10 rural schools in the vicinity of the normal school, where they serve as "student assistants" to the teachers in charge. Except in the cases of two schools which are within a few miles of Chico, the students live in rural communities in which they are assigned to teach. Certain homes have been selected as desirable boarding places and are approved in the same manner as the student boarding places in Chico. Each assistant remains for a period of four or five weeks and is given every opportunity to participate in all phases of the rural teacher's work. Each school is visited at least once a month by the director of the extension division. Students are required to submit weekly reports and are called for a final conference at the close of their service. This assistance is proving a great advantage to the schools cooperating, and the demand is so great that we are obliged to limit the service to the schools offering the best conditions for training and supervision. We plan to build carefully out from this nucleus into as many schools as can be supplied. At present only about one-fourth of our seniors are receiving this training.

Further illustrations of the work of rural practice schools, stated more in detail, will be found in the institutional illustrations in full in the Appendix.

10. EXTENSION SERVICE AND PUBLICITY.

Several principals of normal schools report that the rural public is uninformed about efforts that are being made to prepare rural teachers, and that many local boards seem to be predisposed to employ local girls irrespective of preparation. Public appreciation of new efforts in education is a resultant of several direct and indirect efforts at publicity.

There may be an opportunity to promote the work for rural teachers by a systematic campaign of direct communication with employing offices; but a more profitable scheme is found in dealing with them indirectly through supervising officers. There can be little real obstacle to making county superintendents and their assistant supervisors quite familiar with the efforts of the normal schools to improve the rural teaching corps of the State. This can be done by interchange of visits between the county supervisors and the normal school teachers, by visits to the rural practice schools, by cooperation in local and State associations of teachers, and in reading circles or other forms of extension study and teaching.

The public is reached through general rural interest programs held at the normal school, as shown in the rural life conferences of one or more days which have grown to be an annual event of importance throughout the area served by normal schools in several States, and by county play festivals held on normal athletic fields. For years most normal schools have made their worth known indirectly by the participation of members of the faculty in all sorts of public programs throughout the State. In one case reported in this research a faculty member had made 106 addresses before rural and village audiences in the past year.

One normal school principal aptly refers to these miscellaneous participations as "nonpareil (non-pay-real) engagements," but they all count in the resultant public appreciation. At least one State, California, has recognized the importance of visiting and assisting in the public schools by a law authorizing normal schools to send out different members of the faculty to visit and assist in the rural schools. One normal school in that State reports the use of the new law in sending out the supervisor of the primary department to spend several days in visiting graduates at work in their own schools.

Many normal schools have well-organized extension departments for correspondence and class center instruction by members of the faculty. This is a great work and, where competently managed, is increasing. But the service of this work to rural teachers is capable of increased volume and definiteness in many normal schools. A few normal schools have organized extension service first with espe-

cial reference to rural education. The following statement itemizes the work of one such department:

We answer correspondence from teachers and school trustees on a wide variety of school and community problems. Books, lantern slides, and specimens from the museum are sent out for use by rural teachers. I go out personally to assist in the organization of clubs, to take part in the "clean-up" days, the school picnics, the evening socials, and occasionally to assist a teacher with a puzzling piece of work. We offer to make community surveys and give suggestions to districts considering consolidation or some other community enterprise. We are at present fostering a plan for the consolidation of four small districts just north of Chico. The correspondence courses for teachers are developing into a somewhat extensive service. There are now about 60 teachers taking this work. The courses are in methods in teaching and are designed especially for teachers in service. They follow the work of the regular courses and are under the direction of the instructors in the respective subjects. The teachers apply the methods in their school work and send samples of the results in the form of children's papers and reports similar to those required of student teachers here. This work is followed by attendance at the summer sessions and is proving a very effective device for reaching the teachers who have had no professional training.

No doubt the best way to extend the influence of normal schools for progress in education is through the work done in local schools and communities by graduates. In the present emergency in public service some normal schools are short-circuiting in this matter by giving brief courses in home economics and Red Cross work, and sending out to local communities persons capable of rendering immediately valuable service. To the extent that special supervisors and teachers of secondary school training classes for teachers may seek preparation in normal schools, they afford splendid opportunity for multiplying the local services of the normal schools.

However, if the ideas advocated and demonstrated in normal schools come into any very general use, aside from legislative enactment and official dictum, it will be because graduates of the normal schools have been given a dynamic faith in the ideas taught. To talk social motive to students for two to four years and find them indifferent to local social welfare when they go out to teach raises several questions, one of which is—"Was the sincerity of the instruction proven by the personal life of faculty members and by a responsive institutional sensitiveness to public welfare?" The Colorado State Teachers' College, in its community cooperation plan, offers credit, subject to substitution for part of the required practice teaching, for two consecutive terms of assistance rendered by students in the undertakings of specified local social organizations.

Many normal school faculties would be deeply chagrined if they suddenly became aware that some of the very worst schools in their States were to be found practically under the eaves of the normal

schools; here is a test of extension service which is bound to be applied sooner or later. The best demonstration along this line found by the writer was at Tuskegee, which is located centrally in Macon County, Ala. In this county there are 7,500 negro children of school age and 55 public schools for them. There are 30 one-room schools, and 25 schools having two or more classrooms.

In Macon County there are six schools with teachers' cottages; nine schools are equipped to teach domestic science; 16 are Rosenwald schools (cases where the local community has made liberal appropriations to meet conditions of aid in building by Rosenwald Fund); 27 schools have home makers' canning clubs; 10 schools have boys' agricultural clubs; 14 have school gardens; 18 have school farms; eight have farmers' conferences, and 51 have active boards of school trustees. There are 50 of the enumerated activities in connection with the one-room schools.

The continued stimulation of supervision from Tuskegee Institute has much to do with the progress made in Macon County. A further explanation is found in the fact that a model school is maintained. This school is in what is known as the Rising Star Community, which is just beyond the institute farm, where a combined school and dwelling house has been erected and two graduates of Tuskagee, a man and his wife, occupy and conduct a public school. The house contains five rooms: A sitting room, bedroom, a kitchen, a dining room, and a special classroom. There is also a barn and a garden, with horses, cows, pigs, and chickens. The regular classroom work is carried on in this as in other public rural schools, except that instead of spending all their time in a classroom, pupils are divided into sections and given instruction in the ordinary industries of a farm community. While some pupils cook, others clean the house, others the yard, others work in the garden, and others receive literary instruction.

INSTITUTIONAL ILLUSTRATIONS IN FULL.

Organizers of work in rural education in State normal schools will be likely to visit the best institutional demonstration of this work already in progress. As a valuable supplement to first-hand study, illustrations in complete detail have been secured from institutions varying in their attack upon the work in rural education and these will be presented in full. They are printed in the appendix herewith. The slight repetitions in the first illustration are due to the fact that the account is taken from an inside survey, just published, which had a purpose of completeness.

PART II.—OUTSTANDING PROBLEMS OF PROGRESS.

RELATION OF RURAL TO GENERAL EDUCATION.

Educational progress is an evolution which is best understood by distinguishing, if possible, the sensitive points of contact of what is being done with what is just about to be begun. Leadership is determined by a quick perception of what is the immediately next step and by the will to take this step at once in a common-sense way.

The preparation of rural teachers is a major problem in rural education, and rural education is a significant and an interlocking part of all public educational effort. Rural education in general or any specified part of it may be segregated to some extent for intensive study, but not isolated—this is impossible, more utterly impossible and undesirable each year. A great American philosopher has said that the major problem of human progress is to establish one congruous way of living in the human race.

Consciousness of this greatest problem is spreading from philosophers and statesmen to a constantly more inclusive number of people; and, in the application of institutional agencies to its solution, the military and naval organizations are most nobly and sacrificially holding the foreground of present thought and appreciation. The compelling inspiration of the deeds of soldiers and sailors quickens the thought of leaders upon whom rests not so immediately the present safety of democracy as the continuous nourishing of democracy. This quickened thinking has had forceful individual statement, and the National Education Association is at work through a commission of its ablest members to integrate and clarify the Nation's new educational program.

In a pamphlet of May, 1917, the Commissioner of Education urged—

> The need for better schools to meet the new demands for a higher level of average intelligence, scientific knowledge, and industrial skill, which will come with the reestablishment of peace, makes more urgent the need for more and better trained teachers. Every dollar expended for education and every day of every child in school must be made to produce the fullest possible returns. The normal schools should double their energies and use all their funds in the most economic way for the work of preparing teachers. Appropriations

for the support of normal schools should be largely increased, as should also the attendance of men and women preparing for service as teachers.

Speaking before the normal-school section of the National Education Association, in February, 1918, Dr. W. C. Bagley said:

> Certainly nothing will do more to hasten the day when an adequate training of teachers will be demanded and expected than well-matured plans for effecting such training. And just now the time is particularly opportune for maturing these plans. The low estimate which the public has placed upon public-school service is certain to be revised in the near future. The traditional scheme of human values is already beginning to disintegrate, and it is not too much to say, even now, that the scheme of values which will dominate the new world order must give its highest and most effective sanctions to the kind of social service that teaching represents.

Rural education, by reason of its less well-developed administrative machinery as well as because of its inherent characteristics, has not yet profited in proportion to its scope and significance in the educational status of States, from the current, increasingly scientific, study of education. What is done at present in preparing rural teachers is largely empirical, and the need now is a regeneralization on a scientific basis—the subsoiling of a too superficially worked field.

Dr. Bagley's dictum—"Certainly nothing will do more to hasten the day when an adequate training of teachers will be demanded and expected than well-matured plans for effecting such training"—touches exactly the motive of this discussion. Part I of this manuscript has presented vividly plans that are in the process of maturing. The unselfish efforts which have been put upon the proposition of better prepared rural teachers must not miscarry. Multitudes of men are giving the last full measure of devotion to safeguard democracy; certainly we are not to prove impotent in the presence of this fundamental problem in nourishing democracy.

The needs of rural teachers, stated in general terms, are: (1) Power of scholarly leadership; (2) scholarship and training equal to that of the teacher in a good elementary school anywhere; (3) training specifically adapted to prepare them for their distinctive task; and (4) a whole-hearted belief that they are working at the fountainhead of national well-being—an opportunity which they may surrender, but from which they can never be promoted to a greater task, because there is no greater task.

SPECIFIC PROBLEMS IN RURAL-TEACHER PREPARATION.

The specific problems that have become more or less well defined in the State normal schools which have undertaken to meet the preparatory needs of rural teachers are as follows: 1. What entrance and graduation standards shall be set up? 2. What are good courses of study for rural teachers? 3. Who are good teachers for

students in these courses? 4. What differentiation of classes including practice teaching is best? 5. What administrative adjustments are required? 6. What extension and promotion activities are worth while? 7. How may plans for preparing rural teachers be so perfected that they will parallel the plumb line of democracy?

1. ENTRANCE AND GRADUATION STANDARDS.

At present approximately 60 per cent of the normal schools giving rural courses require high-school graduation for admission, and 50 per cent require two years in residence for graduation, while 23 per cent have both secondary and college courses for rural teachers and 17 per cent have only secondary school courses. The present tendency is to make the minimum for graduation from secondary school courses equivalent in amount to high-school graduation and to give in college courses a limited certificate at the end of one year and a life certificate upon the completion of two years' work in the normal school. These standards are determined by the present frontier of progress in the various States. The State's educational leadership has the task of keeping the standards enforced in equilibrium with the best that the advancing frontier makes possible. A great agricultural State which establishes the most elementary secondary school courses in its normal schools for the preparation of rural teachers and makes no significant improvement in its superficial standards in 10 years is simply accumulating shame against a day of greater humiliation. The test of beginning work in any constructive process is the discovery of a cumulative effect in the results of such work. Leaders define and take advantage of this effect.

2. COURSES OF STUDY.

The best present courses of study for rural teachers consist of four groups of subjects: First, such subjects as are usually given in the department of education and practice, with specific adaptations to meet the actual needs of teachers in rural schools; second, such subjects as give resourcefulness in localizing the common branches in natural, industrial, domestic, and hygienic illustrations and applications; third, such subjects as tend to develop social interest and intelligence and inspire purposes of participation and leadership in rural living; and, fourth, if the length of the course permits, a wide selection of elective subjects appealing to the individuality of the student.

Subjects in particular are adequately shown in the review of catalogues and the institutional illustrations in full presented in the Appendix, supplemented by the itemized statement of the courses given in the State Normal School, Kearney, Nebr., also in the

Appendix. Two-year and four-year curricula for rural school teachers are presented with fullness of itemization in "Curricula Designed for the Professional Preparation of Teachers for American Public Schools," published by the Carnegie Foundation for the Advancement of Teaching, February, 1917.

3. SELECTION OF FACULTY.

Teachers for prospective beginners in rural school teaching should be the best whom the available maximum salary will secure—best in general and in specific preparation. A prepared teacher is: First, one who has fullness and accuracy of knowledge in the subjects which are to be taught and who is determined to become intimately familiar with all the sources at his command to which he may go or send for the increase of his knowledge and the proof of its accuracy; and second, he is one who by patient teaching under competent criticism has been shorn of careless, haphazard, slovenly, weak, and wasteful methods and has by observation, instruction, and practice acquired efficient, time-saving methods; third, a prepared teacher is a manly man or a womanly woman who, by association with nature and humanity through books and by personal contact, has grown into a compelling soul-power sufficient to interpret, to cultivate, to vivify, to individualize, to inspire in children and youth the best ideals of life in general and of the humanity and nature about them in particular; to banish laziness and self-satisfying stagnation by giving the conscience a better grip on the will.

Specific preparation for teaching students in the courses for rural teachers in State normal schools presupposes the general readiness just outlined and an attitude of utter loyalty toward rural education. There can be no secret assumption that there is a better field for work in education. This attitude must be arrived at by specific study of and participation in country living, including education, and it may be honestly kept by the same means. State normal colleges and university colleges of education are slowly providing courses of study and assembling faculty members suited to give opportunity for teachers of rural teachers to make themselves ready. The observation of the writer is that, while there are exceptions, the best foundation for this spcific preparation is country breeding—at least through childhood and youth—enough to establish a permanent understanding of and love for country folks, young and old.

4. DIFFERENTIATING CLASSES AND PRACTICE TEACHING.

The question immediately in the foreground of the situation at present is: What differentiation of subjects and classes for the group of students in normal schools who are preparing to teach in rural schools can be advantageously made? Should action here begin with

a patient research for all the likeness in the needs of urban and rural teachers or should obvious differences in needs be recognized at once and a clearly justifiable differentiation, if not specifically critical, be instituted? In procedure, the second alternative is being applied in social, industrial, and some professional subjects. This is well, for thus theory will emerge from practice, and while, in the hands of too enthusiastic and inadequately educated leaders, differentiation in subject matter tends to overrun necessity and become ridiculous, this is usually corrected in time and a careful restriction of differentiation to actual needs is gradually achieved.

The work of departments of rural education, and where special courses are given in other departments, is to grow the new work into the organic, central life of the normal schools and not to develop a side show. The saner the work of differentiation, the less conspicuous and the more influential the rural group tends to become, both within and without the normal school.

Where academic and professional instruction lose duality and become unified (a suggested probable feature of the new epoch), there will be more general differentiation between urban and rural groups due to the wide difference in the rural and urban schools as to form of organization and location. And yet there may be several subjects in which the usable suggestions made by normal-school teachers will not be fitted specifically enough to the actual situations in which the students use them to warrant different classes. For safeguarding institutional unity and the higher loyalty of school over department it will certainly be well to obliterate to a large degree differentiation in literary, social, and religious activities, and to make only plainly justifiable differences in classes. This will not interfere with departmental seminar work and occasional segregation for social purposes.

Differentiation in practice teaching is more recent and much less well worked out than in class instruction. Within the past two years demonstration rural schools, hitherto utilized by normal schools chiefly for purposes of observation, have been rapidly adapted to use for practice teaching. In addition, a large number of rural schools have been affiliated with the normal schools for practice. In the use of these schools the crudities of initial work are conspicuous. Inadequate funds, undeveloped appreciation of what is being attempted, and an apparent assumption that the whole enterprise is to succeed on a low level of investment of money and of talent in human agents are obstacles just beginning to be cleared away.

One of the outstanding problems of administration adjustment incident to practice in affiliated schools off the campus, which are frequently too far away to permit students to keep up class work in the normal schools, is the balancing, to the advantage of the student and

for purposes of credit records, of the practice and recitation work of students. Present practice in this matter is locally unsatisfactory in several institutions. In some normal schools students drop class work for the period of their practice, varying from one to four weeks, and then reenter class and pick up the current work the best that they can upon their return. Such an arrangement as this can, of course, continue only temporarily, and economical and effective adjustments have already been evolved.

One of the best illustrations of the successful solution of this problem is found in the State normal school at Winona, Minn. In this school the principle invoked by the committee in charge of the course of study to be pursued by those electing to do rural school work is: "Preparation for rural teaching should be just as thorough and just as far-reaching as preparation for city-school work." The application of this sound principle is difficult for many reasons, but by inconvenience chiefly when applied to practice teaching. Five schools in the country have been affiliated, all of which are from 4 to 6 miles distant, and provision is made for students to be on leave from the normal school for six weeks while practicing in these schools. In order to insure that this practice "should furnish values equivalent to, if not identical with, those offered in town," great care has been taken to free the time of students so that they may give practically the whole of their attention to living in the community and working in the practice schools. This is accomplished by organizing the students who elect to prepare for rural teaching into six groups: A, B, C, D, E, and F, so that there is one group (A) practicing the first six weeks in the fall, and a new group (B or C, etc.) ready to go to practice at the beginning of each new six weeks' period through the year. To safeguard the interests of students and preserve the dignity of the normal school, both important considerations, it is necessary to offer class subjects for these students, so that they may get full time on each subject. This is taken care of very well in the term schedule as follows:

JUNIOR X (RURAL EDUCATION GROUP A).

1. (Rural method, ½.)
2. Elective, ½.
3. Rural teaching, ½.
4. Rural teaching, ½.

1. Geography, 1.
2. Rural home economy.
3. Psychology, 1.
4. Arithmetic, 1.

1. Theory of education.
2. Reading.
3. Music, 1.
4. English composition, 1.

Rural method, ½.
Rural-school management, ½.
Drawing, ½.
Drawing, ½.

NOTE.—Students in rural education who do their student teaching in the winter or the spring term must arrange their work in halves similar to that shown for the fall term. Consult classification committee.

By this scheme group A will teach the first six weeks of the fall term and will concentrate on this work with especial reference to method. They may do reading in an elective subject if time permits. For this teaching, a village one-room school, a village two-room school, and two typical rural schools, as well as the rural training schools, are available. At the end of six weeks the students in group A return to normal school and in the balance of the 12 weeks' term complete their rural methods subject, do one-half term in school management, and do double time in drawing. They are then credited with 12 weeks in rural method, in teaching, and in drawing; 6 weeks in management, and 6 weeks in an elective if this is completed, making practically a full and satisfactory term's work.

The author of this plan adds:

Our plan is limited by the fact that we have so few seniors returning for the practice in the first six weeks of the fall term. For next year we have postponed all junior-practice teaching until the students have had at least six weeks of class work with the rural-education supervisor, who then can better choose the students for group B—the group to go out the second six weeks. We found need this year to sift each six weeks so that the weaker students had the longest time to grow. This has made it more nearly possible, too, to apply our rule for regular students, i. e., that no one may teach with an E (condition) in any subject, nor with more D's (just passing marks) than marks above D; though there have still had to be exceptions. Returning seniors can, of course, teach in the fall.

There are many other problems in the control and adequate supervision of practice teaching done off the normal campus, and these problems increase in practical difficulty as the radius of distance from the normal school ("Practice Teaching, Milwaukee," in Part III, illustrates in detail distributed practice teaching). Transportation, living conditions, organization of conferences with the critic teachers to economize the energy and time of these teachers, and the maximum service of supervisors to both critic and student teachers in these scattered centers, are being cared for in practically as many different ways as there are institutions undertaking the work. Possibly no such classic demonstration of the utilization of these varied rural practice centers as that made by E. A. Sheldon at Oswego, N. Y., in the sixties of the nineteenth century in the graded training school can soon be made; but bulletins already issued and the four institutional illustrations presented in this manuscript, conferences being held, institutional and periodical publications, and correspondence are beginning work of a clearing-house character which will presently find adequate editing in a national journal of rural education.

5. FURTHER ADMINISTRATIVE CONSIDERATIONS.

In practice teaching, as in the differentiation of subjects, administrative control is required to preserve institutional solidarity and

insure to the students sensitiveness to the total impact of the whole normal school on the improvement of teaching. Sharply drawn departmental lines with instructors who have departmental rather than institutional horizons debilitates any school and robs students of that chief result of true education—a liberal mind. If the practice for rural teachers is continued for two terms of 12 weeks, possibly the first 12 weeks could be done much more economically in the campus training school, this being utilized for acquiring recitation and lesson planning technique. However, where but 12 weeks are given, the practice had better be in rural schools supplemented by directed observation in the campus training school, and students in courses for urban schools should, as far as the equipment permits, supplement their urban practice with discussed observation in the rural practice schools.

Fundamentally administrative adjustments turn upon these principles: 1. The normal school is a State school which can not, in common honesty, unless restricted by establishing law, allow its efforts and expenditures to be diverted to and used disproportionately for either urban or rural needs. 2. Normal school provisions for the preparation of rural teachers must be made equal to provisions for others teachers in financial and human resources, this principle to apply to physical equipment, to directors and teachers of special courses within the normal schools, and to practice teaching critics and supervisors employed for off-the-campus work. 3. Dynamic support by the administration is a prime essential enforcing all the time the necessity of cooperation on the part of other departments, and reheartening the workers to succeed in their uncharted field.

6. WORTH-WHILE EXTENSION AND PROMOTION.

Close cooperation between normal school extension departments and town or county superintendents of rural teachers is essential to avoid duplication of effort and to knit up the public educational program. State teachers' reading circle courses may be effectively promoted for extension teaching purposes by normal school instructors in many States, and by mutual understanding the more experienced rural teachers who have exhausted the necessarily abbreviated reading circle courses may be enrolled to advantage in more advanced extension courses. Possibly the best extension teaching is being accomplished at present by the visiting normal school instructors who are helping rural teachers by demonstration and suggestion in their own school rooms as they are confronted with specific difficulties and are in a receptive frame of mind.

The necessity for extension and promotion activities is well stated in the catalogues of the Tennessee normal schools:

> The normal schools believe that it is necessary not only to prepare teachers but to prepare places for teachers. To this end they will assist in every movement for developing educational interest and will take part in the aggressive campaign for school improvement in every section of the State.

The working out of this ideal is obviously needed where there is the least effective local leadership. Workers in rural education come to feel this need and to attack it intensely. It is necessary that normal school presidents safeguard the energy of such faculty members. If it is decided to be worth while to do this outside work, then some offset of reduction in or assistance with inside work should be provided.

Wholesome growth of the effort to prepare rural teachers within the normal schools and respect for this work, both within and without these institutions, will turn on the administrative adjustments, already presented, on the thoroughness and correctness of adaptation of the work to the purposes for which it is intended, on the scholarly adequacy of the publications distributed and upon the selection of leaders of superior academic, professional, and social growth to direct it. Such leaders will establish relations of mutual helpfulness with local, State, and national leaders in their own and other phases of rural progress. This will make possible an annual rural progress day program of exceptional merit at the normal school—a day of intellectual and spiritual communion enjoyed in social informality by farm folks among themselves and with their teachers, doctors, ministers, organization leaders, and the potential youths who are to come to local communities in the vantage place of teacher. The sense of proprietorship in their normal school, with which citizens who have come from widely scattered local communities return to their homes after such a day, is significant in the educational well-being of the State.

7. THE PLUMB LINE OF DEMOCRACY.

The safety and nourishment of democracy forbid the continuance, for a longer time than is made necessary by the present order, of publicly paid instruction of rural children by teachers who are one, two, three, and four years less well prepared than the publicly-paid teachers of urban children. Democratic public service ideals forbid any State normal school, in so far as it is supported proportionately by all of the taxable property of the State, to concentrate its activities and consequent expenditures upon the needs of urban teachers. Country property and country children, from one-fourth to three-fourths the total in the various States, have but to ask intelligently

and persistently in the court of public opinion to get a verdict of recognition and service by all State normal schools.

Edward A. Ross, professor of sociology in the University of Wisconsin, thus concludes an appeal written in 1914 ("On Behalf of Rural Civilization"):

As I see the situation here, I would rather the next million dollars this State gives to education went to rural schools rather than to city schools, or high schools, or university. It may be as unfair to spend taxes from city people in bettering the country as it is to spend taxes from country people in bettering the city, but it is not so foolish.

This is not presented in an attempt to array city and country against each other, since the whole spirit of this discussion is in appreciation of the unity, the solidarity of national life; but such a statement comes from Dr. Ross, with the authority of first rate scholarship in sociology, and in form it is vivid enough to arouse thought.

The intensity of specialization with which educational leaders, as well as executives in other enterprises, must attack their tasks forecloses their mental horizons in many instances. Lest such be the case in this discussion, the following statements are introduced:

No other problem is even second in importance to that of maintaining the native quality of the rural population. The rural districts are the seed bed from which even the cities are stocked with people. Upon the character of this stock, more than upon anything else, does the greatness of a nation and the quality of its civilization ultimately depend. If the native vigor, physical and mental, of the people should decline, nothing could save its civilization from decay. Not even education itself can permanently arrest such decay when the inborn capacity to be educated is disappearing. (Thomas N. Carver, professor of economics, Harvard University, in "Principles of Rural Economics," p. 334.)

The country produces population, energy, and original ideas—the raw materials of social life—as it produces food and the raw materials of manufactures. The city combines ideas and thus forms the social mind. In exchange for the streams of fresh life that pour in upon it from farm and village, it sends forth to every rural community, and even to the isolated homestead, stimulating currents of thought and of moral enthusiasm. It quickens social instincts and awakens interests in men and women whose lives were else monotonous and hard. It raises their standards and puts before them formulated policies for their consideration. Genius is rarely born in the town. The world's great faiths have germinated in the desert, or among mountain heights. Its great policies have been suggested by unsophisticated men. It owes its great discoveries and its immortal creations to those who have lived with nature and with simple folk; but the creation and the discovery, the policy and the faith, have lifted and transformed the race only when they have subsequently been fashioned by the mind and have been charged with power from the heart of the multitude. (Franklin H. Giddings, professor of sociology, Columbia University, in "The Principles of Sociology," p. 346.)

I have always thought that we overlook the fact that the real sources of strength in the community come from the bottom. Do you find society renewing itself from the top? Don't you find society renewing itself from the ranks

of unknown men? Do you look to the leading families to keep on leading you? Do you look to the ranks of the men already established in authority to contribute sons to lead the next generation? They may—sometimes they do—but you can't count on them; and what you are constantly depending on is the rise out of the ranks of unknown men, the discovery of men whom you had passed by, the sudden disclosure of capacity you had not dreamed of, the emergence of somebody from some place of which you had thought the least, of some man unanointed from on high, to do the thing that the generation calls for. Who would have looked to Lincoln to save a nation? Who that knew Lincoln when he was a lad and a youth and a young man—but all the while there was springing up in him, as if he were connected with the very soil itself, the sap of a nation, the vision of a great people, a sympathy so ingrained and intimate with the common run of men that he was like the people impersonated, sublimated, touched with genius. And it is to such sources that we must always look. No man can calculate the courses of genius, no man can foretell the leadership of nations. And so we must see to it that the bottom is left open; we must see to it that the soil of the common feeling, of the common consciousness, is always fertile and unclogged, for there can be no fruit unless the roots touch the rich sources of life. And it seems to me that the schoolhouses dotted here, there, and everywhere, over the great expanse of this Nation, will some day prove to be the roots of that great tree of liberty which shall spread for the sustenance and protection of all mankind. (Woodrow Wilson, in an address, Oct. 25, 1911.)

Against this democratic background of broad perspective of which the best minds are conscious, three specific suggestions will conclude this discussion:

1. The needs of all the people in the territory which supports the State normal school and which this school serves should determine the proportionate distribution of students preparing to teach in elementary schools to various specific curricula, as nearly as may be; e. g., one-sixth to primary teaching, Grades I and II; one-third to intermediate teaching, Grades III, IV, V, and VI; one-sixth to upper grades, VII and VIII; and one-third for rural school teaching, Grades I–VIII. These fractions will, of course, vary between localities.

2. President Bruce R. Payne, George Peabody College for Teachers, Nashville, Tenn., has stated, what others engaged to any extent in the preparation of teachers and leaders in rural education know, that this work demands the utmost care in the selection of faculty members to safeguard the early stages of its evolution, giving it initial impetus, and the most liberal salary basis for the retention in this service of the strongest personalities. The assumption of urban superiority is so unconsciously ingrained in some people responsible for the present situation that they do not see the foregoing facts. Without the basis of real leadership, effort (if any is made) is controlled by imitative rather than by thought-out ideas.

3. Dean James E. Russell, Teachers' College, Columbia University, New York City, has made the best expression in print in appreciation

of the preparation of rural teachers. In a letter written the Iowa State Board of Education, 1912, he said:

In my judgment the chief task of the normal schools in the next generation will be to ascertain how to train teachers for rural schools, to educate rural communities to the point of demanding a suitable rural education, and to elevate the professional standing of the rural teacher. All this is a great work, probably the greatest educational work ever attempted in this country. It is the most interesting and inspiring task that has ever been proposed to any body of educators. Any institution fortunate enough to be permitted to enter upon it is to be congratulated. . .

APPENDIX.

INSTITUTIONAL ILLUSTRATIONS IN FULL.

IOWA STATE TEACHERS' COLLEGE, CEDAR FALLS.

By MACY CAMPBELL, Department of Rural Education.

THE TRAINING OF RURAL TEACHERS.

The preparation of teachers for rural schools has been accepted by the Iowa State Teachers' College as a special service that should not be confused with other teacher-training problems, and hence it has a department of rural education to which is committed the direction of this difficult work. This has been done to give the entire rural-school problem an opportunity to be studied and taught and tested in ways that will ascertain the truth and that will determine the difficulties to be overcome and the solutions to be applied. An examination of the results, covering a period of four years, establishes the wisdom of thus segregating the undertaking from the other services of the college and in treating it as an original enterprise that calls for explicit care and sufficient experience to warrant a deduction of conclusions.

The first problem solved was to draft and organize a course of study that would place rural education on a basis as good as that of any other department. This was done to establish the fact that this kind of teaching was as important, as highly esteemed, and as much worth good salaries as any other kind of school work. Accompanying this came the selection of a faculty for this field, every member of which should be a notable person in the teacher-training business, whose status in the college as a whole would give range for notable ability and for an opportunity to do the work assigned under circumstances that advertised and emphasized his capability and efficiency as an educator. This organization has proved that it realizes the importance of its assignment, and the members thus invited have given as much prominence to the college at home and abroad as has been the privilege of any other department, while more prestige has come to the individuals themselves through the merits of their success than they could have gained in longer established work. This singling out of rural education as one of the great undertakings of the present day, and this planning and promoting of the service on a great scale, such as the work deserves, have been important points that brought distinction through prominence and publicity.

Three classes of students were sought for enrollment for these courses: (1) Practical, experienced teachers, who could be rendered notably efficient in the minimum time to do demonstration work in this new field, and who knew by experience the rural-school district; (2) young men and young women of rural

homes who were familiar with the conditions through their environment and who had confidence in the outcome of the country school under good management; and (3) high-school graduates who were ready to accept work in the country schools under more favorable conditions and who had an interest in country life and in country welfare. This selective system of securing students fit for such training was necessary if the work to be done was to give adequate returns and the time given was not to be wasted. Only those who appreciate the country people and the country opportunities can give real promise of being suitable material to accept this training and to develop serviceableness.

For these requirements an elementary subcollegiate course of two years was offered as the best way to get the right patronage and enable the efficiency of results to be a certainty. These students were given more training than education, and they fitted the conditions so admirably and so successfully that their work in the schools has brought much praise to the teachers' college efforts. The graduates of this course are given "the rural teacher's diploma" and a "rural teacher's five-year State certificate." Their efficiency has been such that it is recognized that the giving of the experienced elementary teacher such a chance as this training offers is of immediate practical benefit to both the teachers and the schools.

There is a second course of study in rural education, admission to which is based upon high-school graduation. This course requires two years of preparation, whereby the students may become specially qualified to give instruction in rural consolidated schools. Such graduates receive "the rural education diploma" and the "second-grade State certificate." In the near future most of these matriculants will come from the high-school departments of the rural consolidated school districts.

The training of rural teachers was the second task to be solved. This has been accomplished through a cooperative system of organization whereby enough rural independent districts have been secured to permit the introduction of a new plan of management under the title of "Rural demonstration schools." These 12 schools are each in charge of a sympathetic critic teacher who supervises the teaching of each of the students in training during a full school month. During this time the student is excused from college attendance, lives in the country, and devotes all her time to personal work in the school district among the people and to teaching and managing the pupils of the school under the advice and direction of the critic teacher and the kindly helpfulness of the faculty supervisors, who are constant daily visitors and observers of the work in progress. In addition to these one-teacher demonstration schools there are two demonstration-school townships, with nine schools in each, under a township critic supervisor system, and three demonstration consolidated rural schools, thoroughly organized and provided with modern buildings of high order and with the best of equipment obtainable in every department.

These various schools are under excellent management, their instructors are able teachers, the superintendents in charge are associate professors on the faculty of the college, and the cooperation of the people is complete and reliable. These arrangements give a school population of over 1,200 that contribute to making practical and efficient the service that is required to be rendered as a training-in-teaching institution. To insure perfect harmony the county superintendent is an associate professor of rural education and contributes much to help make progress real and permanent.

The cooperation here existing consists (1) of an exchange of services between the people, the regular teachers, and the college; (2) of the employment of subsidy whereby the college assists in paying a part of the expenses of instructors of said districts in return for the special use that is made of the schools in training students to be teachers; (3) of assisting in person and in speakers for the social center meetings that are held monthly in each district; (4) of furnishing traveling libraries with frequent opportunity for exchange to each school thus cooperating; and (5) of giving much supervision by the professors of the rural education department in return for the right to have a voice in suggesting teachers that are adapted to and are qualified for the service needed.

The third problem solved was that of thoroughly interesting every family in every community thus served. This has been done (1) by personal visitation from house to house in order to ascertain the exact conditions and the attitude that exists regarding educational work; (2) by cultivating the acquaintance of the parents through social helpfulness; (3) by establishing a course of study for home work and home undertakings on the farms for the older pupils; (4) by conducting a regular visitation system throughout the crop time of year to ascertain the progress the pupils are making and the help that they need in order to make their demonstration plots successful, which visitations are continued during the regular vacations of the schools, so that there are no opportunities for neglect or discouragement to arise; (5) by maintaining girls' work in domestic arts and in cooking with the cordial assistance of the mothers; and (6) by having school exhibits, district exhibits, contests for prizes and honors, displays at fairs held by authority of the State, and neighborhood and township picnics where all parents and pupils can consider problems and receive advice from experts on undertakings in which all are interested.

By these organized efforts 32 high-school graduates and 456 subcollegiate students have received special attention during the college year of 1916–17, while hundreds of others have been aroused in their appreciation and helped in their conceptions of what is capable of being done by joining some of these classes while making three months' special preparation for beginning the public service. All the students in rural education have been organized into a permanent society called "The Iowa Club," which has regular meetings and combines literary and professional programs to give the members training in public speaking, in the organizing of community work, in the comprehending of the many factors that are involved in the notable service to which they are planning to give their lives and in bringing communities to a realization of the benefit that cooperation and helpfulness can secure by their own initiative and labors.

In closing this report of accomplishment and faithful service in this great field, it can be stated that these four years of work have had a marked influence on the people where these activities have been existing, that the life of the people as a whole has been encouraged and aroused, and the outlook of the pupils has been magnified and improved to such an extent that they have increased their ambition for moral and intellectual opportunities that they know can be obtained at high school and college, while the spirit of cooperation required by this movement for better schools has developed neighborly sympathy and good feeling in many directions that are equally essential for community progress and community welfare.

PROVISION FOR TRAINING TO TEACH IN RURAL AND CONSOLIDATED SCHOOLS.

1. An ideal arrangement and its cost:

Ideal arrangement:

(a) *For one-room rural schools.*

An ideal arrangement for rural teacher training involves a campus training school, as at present, for observation purposes and in order that the students taking this course may become familiar with rural school conditions, a number of rural schools cooperating with the college in order to furnish opportunity for practice teaching.

(b) *For township supervised schools.*

The ideal arrangement in this case is for the State to employ a township supervisor who will devote full time to the supervision of the schools in the township and a regular teacher for the demonstration school who should be responsible for the management and instruction of this school and thus allow the time of of the supervisor to be free for supervision. The State should pay the salary of this teacher. Student teachers would therefore be trained under this teacher who in turn might be in training for supervision work or other critic work.

(c) *For consolidated schools.*

For observation work the plan mentioned for the one-room rural school is ideal. Student teaching should be done in the various grades and the high school of the cooperating consolidated schools under the same plan as in the one-room rural demonstration schools.

Cost:

(a) *For one-room rural schools, one school only.*

Teaching force: A regular teacher, the State paying a subsidy of from $5 to $15 a month to be applied on the teacher's salary, $45—$135. Supervision (approximate), $37. Total, $162.

(b) *For township supervision, one township only.*

Subsidy for township supervisor per month, $10—$20. Salary of critic teacher for demonstration school, $60—$70. Supervision (college), $400. Mileage for township supervisor, $90. Total, $580.

(c) *For consolidated schools, one school only.*

Subsidy on salary of superintendent, $200—$300. Subsidy on salary of 8 grade teachers, $5 to $10 per month each, $360—$1,080. Supervision, $75—$100. Total, $1,480.

2. Size of rural practice schools.

Rural practice schools:

	1913–14.	1914–15.	1915–16.	1916–17.
Number of pupils	25	150	275	400
Number of practice teachers	16	52	66	86

Amount of practice teaching and observation:

Actual teaching, 60 hours. Observation and management, 60 hours. Illustrative teaching (observation and discussion in campus training school), 40 hours. Conferences with critic teachers and supervisors, 20 hours. Total, 180 hours.

3. The ways in which rural practice teaching is carried on.

(a) *The general plan for carrying on the practice-teaching work.*

Students of the elementary rural teachers' course are required to take one term (3 months) of observation and teaching. The observation is done in the regular campus training school where expert teaching of the fundamental branches is observed. This observation continues for two months. The practice teaching for all students on the elementary rural teachers' course is done in one of the rural demonstration schools and continues for one month. During this time the student is excused from regular class work and is given eight weeks' credit in all other subjects for which she is scheduled. The time of the student teacher during this month is spent approximately as follows: The first day or part of the day is spent in observation of the teaching and management of the school by the regular teacher, in order that the student teacher may become familiar with the conditions, the names of the pupils, and the subjects taught. The regular teacher then assigns certain classes for the student teacher to teach, usually about one-third of the total number of classes on the daily program. On the following day and during the remainder of the month the student teacher prepares her lessons, writes lesson plans, assists in the games and play, visits in the homes, and becomes familiar with regular rural-school conditions, all under the guidance and control of the regular teacher who in turn receives help and advice from the supervisors from the college, some one or more of whom visits each school at least four times during the month.

Students in the college course in rural education are required to have two months in practice teaching. During the first year of their course the practice teaching is done in a one-room rural demonstration school under the same conditions as those described above for students on the elementary course. During the second year the student is required to teach in one of the consolidated demonstration schools. The grade teacher in the consolidated school becomes critic teacher and proceeds in the same manner as the critic teacher in the one-room demonstration school. The superintendent of the consolidated school and the grade teachers who act as critics receive an additional salary paid by the college for the extra service rendered.

(b) *The one-room school plan.*

The college has made arrangements with the boards of 15 one-room country schools near Cedar Falls, whereby the regular teacher for each of these schools is nominated by the college, with the understanding that students on the elementary and advanced courses in rural education are to do their practice teaching in these schools under the direction of supervisors authorized by the college to take charge of such work and the regular critic teacher. The college pays a subsidy of at least $5 per month on the salary of each critic teacher, furnishes library books, and gives special supervision.

The teachers who have charge of one-room country schools and who are employed by the district boards with the advice of the college supervisor conduct the schools in the usual way, and act as critic teachers for students who do their practice teaching in these schools. The critic teacher is responsible for the correction of all errors made by the student-teacher and at all times protects the interests of the children against poor student teaching.

The student-teacher feels in duty bound to serve with the critic teacher. She makes lesson plans and submits them to the critic teacher. She is willing and ready to take suggestions, and assumes responsibility for the discipline of the class or group of which she has direct charge. She carries on the work and instructs the pupils in accordance with the plans of the critic teacher so that the school will as a whole make progress.

NOTE.—Critic teachers: In order that dependable critics may be employed and that their tenure of office may be increased, a satisfactory salary must be paid by the regular school board and an additional subsidy of from $5 to $15 per month should be paid by the college cooperating with the district.

(c) *The amount of practice teaching being done at any one time.*

The number of student-teachers during 1916–17 was 66.

NOTE.—These student-teachers did 120 hours of practice work and observation in the rural demonstration schools and 40 hours of observation work in the campus training school.

The number of critics and supervisors during 1916–17: Critics, 19; supervisors, 3.

NOTE.—A part of the time of each of the three supervisors is spent in each school. One supervisor is directly responsible for the general welfare of the school, its relation to the community and the college; one supervisor is directly responsible for the supervision of the practice teaching; the third supervisor is particularly responsible for the methods of instruction of the critic teachers, with special attention to the language and reading work. Each supervisor cooperates with the others and assists them when necessary in their work.

4. Approximate distribution of time of a critic teacher in a one-room rural demonstration school.

Phases of work.

	Average hours per week.
(a) Managing the school	4
(b) Supervision of student-teacher	2
(c) Teaching	15
(d) Other work—	
Assigning work to student-teacher	1
Reading lesson plans	3
Conferences with student-teachers	4
Committee work (social and community center)	2
Settling matters of discipline	1
Making records and reports	2
Supervision of playground	6
Conferences with college supervisors	1
(e) Preparation of work	10
Correction of work	2
Total	43

THE IOWA CLUB.

The students enrolled in the various courses in rural education and the members of the faculty of this department meet from 6.30 to 8 p. m. alternate Mon-

day evenings for social development and study of matters pertaining to the improvement of rural life in Iowa.

This is a voluntary organization and its meetings have had a large and enthusiastic attendance since the organization of this group about five years ago. One-half hour of each meeting is devoted to community singing. The best songs are learned and sung by the whole group for pure enjoyment. This move looks toward encouraging more group singing in rural communities.

The best games for community recreation are learned and played for pure enjoyment. This activity looks toward encouraging more group recreation in rural communities. Studies are made into rural-life conditions in Iowa, such as increase or decrease in rural population, ownership and tenantry on Iowa farms, average yield of corn in different counties, better roads, improved farm practice, consolidated schools, etc. The activities of the club give its members an opportunity to develop executive capacity and the power of leadership.

NEW HAMPSHIRE STATE NORMAL SCHOOL, KEENE.

By Eugene Tuttle, Director of Training Schools.

TRAINING FOR RURAL SCHOOL TEACHING.

I. Courses offered.

1. There are no regularly organized or differentiated normal-school courses dealing specifically and exclusively with rural school interests. Rural school conditions receive consideration in education, sociology, and school-management classes in the same proportion as any specific type study or reference is made. All methods, plays and games, manual and domestic arts class teachers emphasize rural school conditions in their respective courses, and the work is organized so that it is adaptable to urban, village, or rural schools. A course required for all seniors one semester, one period per week, is planned for fall of 1918. This will be called rural education and will deal with rural school organization and management, including some rural sociology.

2. Nature study and gardening. Junior year, 2 hours per week; senior year, 4 hours per week. Equipment—Greenhouse 125 feet long; ample grounds for small demonstration-school home gardens. Instructor—Specialist in agricultural education and greenhouse management. Aim of instructor—preparation, management, and harvesting applied to school home gardens, both ornamental and vegetable, adapted to rural, village, or urban conditions.

II. Training-school organization and supervision at Keene Normal School.

A. One 10-room junior high school, grades 7–8.
B. One 12-room grade school, grades 1–6.
C. One 8-room grade school, grades 1–6.
D. Two 4-room grade schools, grades 1–6.
E. One 3-room grade school, grades 1–8.
F. Two 1-room grade schools, grades 1–6.
G. Three 2-room grade schools, grades 1–4.

A, B, C, and D are used for regular grade training. General-organization plan is (*a*) two rooms in charge of one critic teacher, one graduate assistant, one or two students; (*b*) two rooms in charge of one critic teacher, three

students. Graduate assistants are graduates of regular two-year course, selected for third year for experience at a salary of $10 or $12 per week.

G are two-room buildings to accommodate younger pupils outside the center of the city, in charge of one critic teacher, one graduate assistant. Student teachers may be assigned to these buildings.

E is arranged as a typical village school, having one course of junior high-school organization for grades 7 and 8, manual and domestic arts equipment in one room.

In charge: One primary teacher, grades 1, 2, 3; one intermediate teacher, grades 4, 5, 6; one junior high teacher, grades 7, 8; one student teacher in each division.

F are one-room rural schools, in charge of one teacher, one student.

All teachers are paid by the State, the city paying to the State tuition for pupils at a varying rate per capita of average attendance in all schools.

III. Supervision of schools and student teaching.

Organization:

(a) One supervisor of training who has charge, practically as superintendent of schools, of all schools in the city mentioned in II, with duties as follows: 1. General school supervision. 2. Directs assignment of student teachers. 3. Has school management and law with senior class, one period per week with each division. 4. Conducts weekly meetings of grade teachers either as grade meeting or a general meeting. 5. Individual conferences with teachers and student teachers.

(b) Grade critic teachers as noted under II. These report to supervisor by form and by conference regarding student teachers.

(c) Normal school department heads direct methodology by meetings with teachers under 4 above.

Present supervisor, as preparation for the work and understanding of rural conditions, taught two terms in remote one-room rural schools, college graduate, normal-school graduate, master's degree at teachers' college, having there two courses in rural education, seven years' district superintendent of schools (including many strictly rural schools) before present position.

IV. Student teaching plan.

Junior year:

1. Class observes in groups of about 20 students, one afternoon per week, one demonstration lesson by each of two teachers in one of the training schools, by direction of the supervisor of training. These are arranged with the teachers by the supervisor after conference with the head of the subject department as to content of the lesson to be observed.

2. After the demonstrations students scatter through the building for a 15 or 20 minute period, taking one or two pupils for individual coaching at direction of teachers in charge.

Senior year:

Students in two divisions. For nine-week period one has practice teaching and one academic work, changing at end of each nine-week period. School year is 36 weeks, hence each student has 18 weeks practice teaching. While on teaching assignment students devote time exclusively for full school day at place where teaching.

Before class is assigned to practice teaching students are given opportunity to express individual inclination for primary, intermediate, grammar, and rural work. Assignments are not restricted to this expression. All are given experience in as many as possible of these divisions and some

are excused from primary or grammar grades for reasons of unmistakable manifestations of inadaptability for a particular group, made evident from reports of critic teachers and observation of supervisor training. The training period in one room of each group varies from 3 to 9 weeks. All electing rural work are given from 3 to 5 weeks' full time in a rural school.

V. Rural school organization and management.

(*a*) Teacher. No special standard qualifications required. Must have had normal school training, successful experience, and manifest genuine inclination for rural school work and allied interests.

(*b*) Equipment. Up-to-date heating (except box stove in one building), lighting and toilet arrangements, one manual-training bench, few tools, oil stove and dishes for domestic work, swings, teeter, jumping standards, quoits, etc., for recreation, in order that students may know what is possible in country districts.

(*c*) Organization. The schools are organized as typical rural schools as to program, conduct of work, grouping of classes and individuals. Student teacher has regular class work, thus acting practically as an assistant, and consequently more classes are really possible than when there is one teacher, but the work is regulated so that the student will not obtain mistaken idea of the possibilities confronting her when she assumes charge of such a school alone. Students usually alternate with teacher in taking charge of woodworking with the boys and cooking and sewing with the girls. One hot dish is prepared in winter each noon for pupils staying for noon hour, and both teacher and student also remain for noon hour.

VI. Neighboring town cooperation.

Opportunity for substituting in neighboring towns proves mutually advantageous to students and towns. These are usually one-room rural schools. These opportunities are of two classes:

1. Indefinite assignments of from one to three weeks to substitute during temporary absence of regular teacher.

2. Permanent school positions operated by the normal school. These schools were not able to secure regular teachers, and local board arranges with the normal school for teachers. In these schools the supervisor provides one student teacher, changing every four or five weeks. Students are carefully selected and special effort made to provide continuity of the work in the schools thus supplied. Usually from one to four or five schools are thus supplied. These students are paid by the town in which they are employed, usually $10 per week.

This plan serves (*a*) to give good, practical, independent teaching experience; and (*b*) to assist financially needy students.

The results usually are satisfactory because (*a*) students are exceedingly ambitious to succeed in these special assignments; and (*b*) careful preparation of work brings such results in the schoolroom that a favorable impression permeates to the homes represented, and people generally favor the plan.

Supervision: (*a*) Supervisor of training endeavors to call at least once on the student in these assignments; (*b*) local district superintendent or school board reports on form to supervisor of training regarding each student substitute or teacher.

STATE NORMAL SCHOOL, KEENE, NEW HAMPSHIRE,

STUDENT SUBSTITUTE ASSIGNMENT.

Name_____

To substitute at_____

Grades_____Number pupils_____

For period of_____{weeks / days} from_____to_____191 .

Salary_____

Superintendent or principal please report briefly on back of this card regarding the general success, strong and weak points and mail card to

SUPERVISOR NORMAL TRAINING SCHOOL,
Keene, N. H.

KEENE NORMAL SCHOOL.

STUDENT TEACHING RECORD OF.....CLASS.....

.....GRADE. .....SCHOOL. ....WEEKS FROM.....TO....., 191... .....TEACHER.

A.	B.	C.	Indicate approximate number of times each subject listed below was taugh by this student.	
Personality:	Recitations:	Initiative.....		
Health.....	Preparation.....	Originality.....		
Disposition.....	Technique.....	School management:		
Attitude.....	Organization....	System and tact.	Reading.....	Arithmetic.....
Manner.....	Adaptability....	Care of room..	Language.....	Geography.....
Voice.....	Relative values.	Care of material.....	Grammar.....	Spelling.....
Language.....	Pupil's initiative	Light, ventilation, etc.....	History.....	Physiology.....
Habits.....	Attention and interest.....	Class control.....	Music.....	Nature study.....
Scholarship:	Questions—Number:	Board work.....	Drawing.....	Cooking.....
Subject matter...	Quality.....	Special subjects:		
Accuracy.....	Sequence.....	Music.....	Manual training...	Sewing.....
Fullness.....	Distribution.....	Drawing.....		
	Skill with answers...			

Attendance:
Half days absent.
Times tardy.....

Rank.....

This record should be strictly private and confidential and should be on file in supervisor's office on Monday following end of assignment on Friday. Select characteristics instead of marking in all points. Mark all in column C.

Symbols: S, Superior; G, Good; F, Fair; W, Weak. No entry indicates "satisfactory."

+ Improving; — Losing ground.

Rank: On scale of 100, with passing mark 70.

On reverse side list (1) causes of absence, (2) genera remarks.

VII. The efficiency of rural training at Keene may be gauged somewhat by the continued demands of district superintendents and school boards for graduates to take rural positions, the supply of graduates not being equal to the demand, and the interesting and enthusiastic reports of students taking up rural school teaching.

VIII. The following tabular arrangement summarizes some facts regarding training and rural teaching. In this connection, rural is the term applied to country communities having one or two-room schools, and not based on the distinction of the U. S. Bureau of Education which limits the rural community to comparative population basis. If the population basis were taken it would include more graduates in three and four-room village schools, organized same as in larger towns.

1	2	3	4	5	6	7	8	9	10	11	12
											Per cent.
1913	35	11	$10–$13	$11.20	3	$10–12	$11.16	3	11	10	31.4
1914	19	2	11– 12	11.50	2	10–10.50	10.25	2	2	11	21
1915	32	7	10– 14	11.75	6	10– 14	12.62	12	11	4	43.7
1916	54	14	10– 14	11.61	9	12– 14	12.88	14	19	1	42.5
1917	79	20	10– 15	11.95	12	12– 15	13.03	18	13	6	40.5

[1] The figures in parentheses refer to the heads of columns in the above table.

(1)[1] Class, years of graduation; (2) number in class; (3) number teaching in one-room rural schools first year after graduation; (4) salary range per week in one-room schools; (5) average salary per week in one-room schools; (6) number teaching in two-room rural schools first year after graduation; (7) salary range per week in two-room rural schools; (8) average salary per week in two-room rural schools; (9) number teaching in rural schools who had rural school training in normal school; (10) number teaching in rural schools who had no rural training in normal school; (11) number in class who had rural training in normal school but did not teach first year in rural schools; (12) per cent of class teaching in rural schools first year after graduation.

GEORGIA NORMAL AND INDUSTRIAL COLLEGE, MILLEDGEVILLE.

By Sue Childs Cleaton, Department of Rural Education.

WORK IN RURAL EDUCATION.

1. Instructor's preparation; (*a*) Scholarship—B. S. in rural education, George Peabody College for Teachers, Nashville, Tenn., plus one summer term of graduate work; (*b*) experience—two years teacher of a one-room rural school; one year principal of a consolidated rural school; six weeks as teacher of the fourth grade in a city school; three years as instructor in agriculture, chemistry, and physics in a town high school; three years supervisor of rural schools of two counties in Virginia and as extension work in home economics from the Virginia State College of Agriculture; one summer instructor of primary methods in a summer school for teachers, Pensacola, Fla. Has had experience in teaching in four Southern States.

2. All seniors are required to take a course of one-half year in rural education. All special one-year teacher-training students are required to take a short course in rural education. In addition an elective advanced course is open to seniors who have completed the required course. The advanced course continues throughout the year and consists of two recitation periods and one double laboratory period per week.

Number of students taking rural education, 1917–18.

Total number students on senior roll	225
Total number seniors taking rural education	225
Special teacher-training one-year students	30
Special students taking rural education	30
Number students taking advanced elective course in rural education	45
Total number of students taking courses in rural education	300

3. The following course in rural education is required of all seniors: (*a*) Cubberley's "Rural Life and Education" is studied in class and in addition much reference work in the rural school library is given. This library work includes references in "The Rural Teacher and His Work," Foght; "Rural Education," Pickard; "The Work of the Rural School," Eggleston and Bruere; "Teaching in Rural Schools," Wofter; "Better Rural Schools," Betts and Hall; bulletins from the Bureau of Education and from other sources; inspirational books, such as "The Brown Mouse," "The Corn Lady," "Jean Mitchell's School," "The Rural School from Within," and others. Every student reads at least two of these inspirational books and these are discussed in class. (*b*) A study of the evolution of American rural life and institutions. (*c*) The physical environment of the rural school—the building, equipment, grounds, sanitation, with plans for improvement. (*d*) The preparation and work of a rural teacher. (*e*) The organization, maintenance, and management of the rural school. The course of study—its enrichment and adaptation to the needs of the rural child. (*g*) The social work of the rural school for the community, including the organization of clubs. Demonstrations and model programs are given in classes on ways of organizing and conducting community clubs. Combination of classes and elimination of useless and obsolete material from the course of study are discussed. Demonstration of ways of adapting subject matter to rural schools are given in class with criticisms. The making of the daily schedule of classes and distribution of time for recitation and study periods among the different classes or divisions.

Outlines of seat work, industrial art work, home economics, etc., practical in a rural school, are discussed and each student is expected to carry out one project along these lines to be used as a demonstration. The problems must be made of material available in a rural community—such as box furniture, baskets of native materials, pine needles, grasses, etc., sewing problems making use of flour sacks, rag rugs, etc. These problems are kept on exhibition in the class room and are taken out to rural schools to be used as models.

Consolidation is studied, with advantages, objections, etc., and each student is expected to make a study of the educational conditions in her home county, making a map, locating the schools, outlining the economic conditions, the agricultural resources and wealth. In this work she secures the cooperation of the county superintendent and others.

Practice work: The white schools of Baldwin County, 15 in number, are used as practice schools. Each student makes at least two visits to rural schools and teaches during each visit. On her return she writes an account of her trip and makes suggestions for improving the school. These trips are then discussed in class. The students teach lessons in English; dramatize stories; correct bad English; teach penmanship; tell stories; teach songs, games, picture studies; give lessons on gardening; teach all kinds of handwork, such as basketry, booklets, making shuck door mats, iceless refrigerators, flytraps, woodwork; give demonstrations in cooking, taking along the stove and materials; give demonstrations of the fireless cooker, the cereal or other dish to be demonstrated, cooking in the cooker on the way to the school, where it is served hot; lessons are given in sewing, this year the Red Cross work being stressed.

As a result of two years' practice work in the county, many schools have gardens, several are equipped with volley balls, croquet sets, and other playground equipment; several have raised money and bought libraries, a number of school houses have been painted inside and out (the normal students took along paint and brushes and painted one school, with the aid of the teacher and pupils); sand tables have been made and other handwork done; a school lunch is prepared and conducted in several schools. The rural education department

planned with the county superintendent and teachers a school fair and athletic contest last year, which was a great success, and are again aiding in plans for a similar occasion this year. When asked what part of the course in rural education has been of most benefit to them, the students have invariably said: "Our visits to rural schools, where we see and put into practice the things we have learned in class."

4. Other required courses correlating with the rural education work and forming a background for the course. All students are required to take the following courses: (*a*) One year of agriculture, including practical work in gardening; (*b*) one half-year of poultry, including practical work in running incubators and caring for the chickens; (*c*) one year of industrial art work; (*d*) one year of fine arts, with emphasis on the arrangement and decoration of the home; (*e*) one year of sight singing and public school music; (*f*) one year in home economics, including work in cookery, clothing, and sewing; (after the freshman year students may elect an additional year in home economics and specialize in that department); (*g*) courses in health, sanitation, and physical training are required during the entire college course; (*h*) in addition to the above, two years' work in the normal department of the college is required. This work consists of psychology, methods of teaching, with 16 weeks' practice in the training school of the college, a review of the common school subjects, history, English, mathematics, etc. Latin and higher mathematics are elective.

5. The course in rural education is differentiated from other method courses in stressing the adaptation to rural needs—buildings, equipment, sanitation, combination, and alternation of classes, the need of much handwork and outdoor activities, the adaptation of subject matter to rural needs, the introduction of agriculture and home economics, and plans for teaching these subjects with little or no equipment, how to organize community clubs and to use these to secure the cooperation of the people to build up the school, practice teaching in rural schools as differing from practice teaching in the graded practice school, smaller classes, management of classes not reciting, keeping all pupils busy, lack of illustrative material, maps, etc.

6. Many of the rural schools throughout the South are improperly lighted, poorly equipped, and lacking in sanitation. The people are often opposed to consolidation, so the greater number are small one-teacher schools. Fifty-seven per cent of all schools in Georgia belong to this class. Students must be prepared to face and make the best of conditions as they find them, interest the people, build up the small schools, and educate the people to the idea of consolidation and to local taxation in order to secure the funds to finance the larger school. They must know how to organize the people of the community and get them in the habit of coming to the schoolhouse and of working and playing together, thus overcoming the indifference, isolation, and lack of progressiveness found in many communities.

The young teacher must know what equipment is most needed and how and where to obtain it, how to select a library which will serve the community's needs, how to introduce the practical rural subjects in a simple, practical way, which will meet the approval of the people and win their cooperation. The small district with its three trustees still holds the balance of power throughout the South. The teacher must create a sentiment for a county tax system and a stronger county system of control, which will make possible longer terms and better salaries, and will make consolidation possible.

Seventy-nine per cent of Georgia's population is rural, while 83 per cent of her school population live in the rural districts. With these conditions in mind the course in rural education has been planned. As fully 75 per cent of the students later teach in rural communities, all are required to take the course,

as the students who teach in city schools will have a broader appreciation of rural life. The Georgia Normal and Industrial College believes it can serve the greater number by training its students to do rural work. Many of these students become rural leaders in their communities as principals of larger schools, as supervisors, or as home demonstration agents.

7. The aim of the advanced elective course, in cooperation with other departments of the college, is to train those students electing it to become rural leaders along these lines.

OREGON STATE NORMAL SCHOOL, MONMOUTH.

By M. S. PITTMAN, Department of Rural Education.

PREPARATION OF RURAL TEACHERS.

The department of rural education was established in 1913 and the head of the department spent three-fourths of the school year of 1913–14 in acquainting himself with the State of Oregon. This was done by doing institute work in every county of the State during the institute season; by spending a week at a time with county superintendents and rural-school supervisors visiting rural schools, holding community meetings, etc.; by visiting all of the high schools of the State and meeting with the teacher-training classes; and by attending school-board conventions and other meetings of kindred nature.

After this experience the first courses based upon the knowledge of conditions found were offered during the last 10 weeks of the regular session. The classes were exceedingly small, only 37 enrolling from the entire school for any of the work that was offered along rural lines—school problems, economics, sociology, and rural-school supervision. Since that first course, though, the attitude of the students toward rural work has been very different, because at least one-third of all students enrolled in the school, during the regular year or the summer school, have been taking the rural courses. During the present year about one-half of the student body is taking rural-school work.

The work of the department has changed from year to year with rapid increase of interest, rural vision, and popular enthusiasm. This enthusiasm has been generated by varying stimuli. At one time a contest in school-house representation in which the house of the pioneer, the house of the present and the house of the future were the problems for solution; at another the construction of a model rural community with model farms, barns, residences, school, and other community buildings; at another time, rural school week; this year rural life week was the big event of the rural department. All of these serve as natural motivators of constructive dreaming, painstaking research and study, original, definite, and careful work, good-natured rivalry, and boundless enthusiasm on the part of all who participate and it serves to awaken interest and develop sympathy in those who look on. The grand total of results has been that in the Oregon Normal School, at present, every one realizes that the normal is training teachers for rural schools and urban schools, and nobody blushes when he says he is taking the rural course.

With the cooperation of the five county superintendents of Washington, Yamhill, Polk, Marion, and Benton Counties and their teachers, rural school week was observed during the year 1916–17. This was done by sending two teachers to each of 75 one-room rural schools located in the five counties. In this way each of the teachers taking the course had one week of experience in a real rural school and a real rural community. While this week was a great success and did great good to the visiting students, to the schools, and com-

munities visited, and did more than anything the normal had ever done to bring it in touch with the rural section of the State, it was realized that that was not sufficient to train rural teachers for rural school work. The normal school, therefore, this year obtained three rural schools for practice purposes. These schools are: Oak Point, located 5 miles northeast of Monmouth on the Salem and Independence highways; Elkins, located 5 miles southwest of Monmouth, and Mountain View, located 20 miles south of Monmouth on the West Side Electric of the Southern Pacific.

In the Oak Point school there is an average of 15 pupils; in the Elkins school there is an average of 25; in the Mountain View school there is an average of 60. Only the elementary grades are taught at Oak Point and Elkins, but there is an accredited two-year high school at Mountain View.

Fifteen student teachers, who are taking the rural course, are working in the three schools at all times, there being three at Oak Point and six each at Elkins and Mountain View. These student teachers work for three weeks and are divided into three classes like the United States Senate, one-third of whom are always doing their first week of work, one-third their second week, and one-third their third week. During the first week that the students are in the school they do the following things: (1) Serve as head housekeepers; (2) supervise the play ground; (3) prepare the hot lunch; (4) follow the work of the teacher who is doing her third week of work, whom she will succeed in teaching certain subjects on the following Monday; (5) refresh herself upon all the subject matter already covered by the class; (6) prepare outlines of the work she is to do for the next two weeks; (7) tell some classical story on Tuesday of the first week; (8) present to the school some standard picture on Thursday; (9) give special attention to the seat work of the little people.

The work of the school is divided into longitudinal sections and during the second and third weeks the student teacher teaches the subjects of the section for which she has been preparing during the past week. The plan is to have each student teach some classes in each and every grade in the school, so as to acquaint her with the general character of the work and the nature of children of all ages.

In all cases the student teachers live in the homes of the people of the community in which they teach.

When they shall have completed their practice in the school, they return to the normal and resume their class work at whatever point they find their classes which they left three weeks before. No special credit is given for the practice teaching, but no deductions are made from other subjects because of the three weeks' absence. The plan is not ideal but it answers all purposes better than any other plan we have devised to suit our own particular conditions and facilities.

Reports of the students' work in the rural school and community are made to the head of the department by the supervising critic for the work in the school, by the landlady with whom she lived as to her home qualities, and by the student herself as to what she received from the work and under what conditions she thinks she might have received more.

As supervising critics for these schools we have three very excellent women: Miss Florence Hill, at Oak Point; Miss Gladys Carson, at Elkins; and Mrs. Nellie G. Tirrell, at Mountain View. Miss Hill is a graduate of the Oregon normal school of the class of 1916, 23 years of age, and receives a salary of $900 per year with an annual increase of $100 for three years. The community in which she teaches is made up of a somewhat stratified society—college graduates and people with practically no education; landholders with no children and children owners with no land; landlord and tenant. The school

itself is excellent but the community spirit is lacking in cooperation and purpose.

Miss Carson is an Oregon Normal School graduate of the class of 1914 and Willamette University graduate of the class of 1917. She is 27 years of age and receives $1,000 salary, with an annual increase up to $1,300 as the maximum. The Elkins community is quite ideal—practically all of the people landowners with children, everybody possessed with community pride, intelligent and purposeful; a better spirit of cooperation could not be desired.

Mrs. Tirrell is a graduate of the Winona Normal School, 1898, and a graduate of the University of Wisconsin in 1905. Her salary is $1,100, with an annual increase for three years with a maximum of $1,400. The Mountain View School is located only four miles from Corvallis, where our agricultural college is located. Its patrons are progressive farmers, dairying being the chief industry. An excellent educational and industrial spirit are evident here.

Each of the school districts, cooperating with the normal school, contributes toward the salary of the teacher what it has been paying for its teachers, viz, $60 per month at Oak Point, $75 at Elkins, and $120 at Mountain View. The school district bears all of the expense that it would ordinarily bear, the normal school adds to these amounts whatever is necessary to get the sort of supervisors it desires for the work and any other expense that would naturally be caused by it being a training school for the normal school.

It becomes my task as the head of the department to give the students in the rural department the economic, social, and educational viewpoint necessary for successful rural work. Classes are offered, therefore, for the training of rural teachers and for the training of rural-school supervisors and county superintendents. Special training is provided for the zone plan of rural supervision which has been evolved by the department. Besides this work in the normal school I make a visit each week to each of the schools for the purpose of giving unity of purpose to all of the schools, rendering any assistance I may to the supervising and practicing teachers, and getting in touch with the life of the various communities.

Regular faculty meetings with the supervising critics are held once in three weeks, at which times the problems of the department are presented and solved if possible. My experience has shown me that the problems of training teachers for the one-room country school are numerous and difficult, but the task has proved an absorbingly interesting one and, though the curtain around it is dark and thick, there are a few rifts through which gleams of light appear. We are happy, hopeful, and following the gleam which leads to a real rural school.

SUPPLEMENTARY SUGGESTIONS.

WHAT EXPERIENCED LEADERS DESIRE.

A State supervisor of rural education writes as follows:

I believe from my experience in training rural teachers and later in supervising rural teachers in service that the following points seem to cover the work that I should expect normal schools to do to prepare rural teachers:

1. A working knowledge of subject matter, principles of education, and methods similar to the same line of work for students preparing for any line of teaching, though given in separate classes with a rural-school application if possible.

2. A spirit of rural mindedness created through (*a*) the study of rural sociology; (*b*) frequent contact during the normal-school course with rural social affairs and some responsibility for the same; (*c*) living in the country during the period of observation and practice teaching.

3. A working knowledge of rural-school administration through (*a*) observation and practice teaching in typical rural schools under expert critics; (*b*) study of laws affecting rural schools and a comparison with similar laws of other States; (*c*) study of financial data of typical rural districts and practical demonstration of uses to be made of such data.

4. Resourcefulness through (*a*) rural project work included in the courses in agriculture, household arts and industrial arts; (*b*) use of material at hand in improving the physical conditions of the rural school during the period of practice teaching.

The following suggestions are made by a normal-school teacher of rural education:

Rural teachers need to be trained to do three things—to teach, to lead, and to live in the country.

I. To accomplish the first, there should be (1) Courses giving the principles of teaching in order that there be some meaning to teaching for the teacher himself. He must know how to work out these principles and adapt them to his particular community and changing needs. Without them he will be narrow and eventually fail to give new nourishment to the growing plant. (2) These principles must be fully illustrated and frequently demonstrated in order that the student should learn how to apply them. This demonstration work should be done in different types of schools, rural especially, and graded. (3) There should be an opportunity to try out these principles through practice teaching. This should include actual teaching and management. (County superintendents constantly tell me students fail because of poor discipline and not because of poor teaching. It is true that good teaching begets interest and interest prevents poor behavior. This good teaching does not come to the inexperienced teacher at first and he must know some immediate means of handling the situation.) (4) Normal schools should equip teachers with immediate helps, something to use the first day of school—printed charts, number cards, attractive pictures for schoolroom, lists of books for children to read, courses giving subject matter of common elementary schools.

II. The training for leadership must for the present be very definite. Show how to organize a boys' and girls' club, teach a game, have school programs, organize fathers and mothers, carry on hot noon lunches. For this students should themselves be organized to study topics related to rural life, learn to play games, fundamentals of cooking, sewing, manual training. They should study rural sociology for principles relating to leadership and do the above things as application. In the rural communities where the rural training schools are located, students should have an opportunity to observe and participate in local organizations. In order to really find out something of rural people, they should live in the community while doing practice teaching. There should be many informal social gatherings for these students.

III. It is the greatest task of all, though the most neglected, to prepare teachers to live in the country. I almost feel like saying that it is hopeless to attempt to prepare students to teach in the country if they do not like to live there. No one can do good work unless he enjoys it, and living is the principal thing in teaching. No matter whether the individual is city or country bred, he must know how to get satisfaction out of life. We should develop wide

interests in students so that they will have something besides school work and social work to serve as personal interests and study. Interest in some form of nature study (birds), some hobby in agriculture (flowers), reading, music, art. A knowledge of cooking, sewing, and manual training will help to make one's material living in the country a better one. If one needs to help with the housework, be prepared. If possible, have a home for the teacher. This will give more satisfaction for living than almost anything else. Have some hollyhocks and poppies planted by the door. Feed the birds. Keep a cheerful fireplace where children and grown-up neighbors can drop in and visit.

These additional paragraphs are selected from replies received from other leaders.

1. The fundamental need is the attitude of the training teacher. His philosophy of life and education and particularly of rural education must form the background of whatever is done. The teacher's spirit of democracy or autocracy is reflected in the "set" of the student's mind. Just at this time I would put personality and character and right attitude in teachers foremost in what a normal can do for rural teachers. The future of this country depends upon this, for country people are primarily to be reached through country schools. If care is taken in selecting the teacher who has the right personality, democracy may be taught along with even arithmetic methods as a by-product. My point is, that the emphasis must be placed not on the course of study, but on the administration of the course of study. * * * Rural teachers will be much more "ready for their work" if a better salary is paid them and longer terms of school maintained. Two county superintendents in Washington, in 1905, decided country teachers were not paid enough—one of these county superintendents was N. D. Showalter—and because of the definite program those people organized and carried through, Washington rural teachers are being recognized by salaries paid and by professional respect. This end was accomplished by directors' meetings in the county, where they were taught the difference between a cheap teacher and a good teacher; and so salaries were raised in the two counties. When Mr. Showalter became head of the rural department in Cheney Normal School, this plan was extended to include conferences and summer schools for county superintendents, where we taught them the needs of higher salaries and told them what rural teachers should expect to give and get. If a normal school will consistently carry through such a plan, in five years it will have raised salaries for rural teachers to the place that good teachers will be willing to stay in the country, and a demand will be created for good rural teachers. Incidentally, this movement tends to raise standards for village and city schools by the (limiting) comparisons that arise.

2. The normal school can help specifically in this great work by exalting rural life continually. (The war is helping some in this respect.) It can teach and preach the doctrines of better farming, cooperation, better living, more permanency in land tenure, better, happier, and more contented homes. It must inspire these young people to be leaders for the farm community rather than old-fashioned pedagogues. By some scheme along this line it must prove to farmers that an efficient rural teacher pays better dividends for the community than even modern and up-to-date machinery and the best types of live stock. It is not a dream. I believe thoroughly that the normal school can and must and will help in this way. The normal school can help specifically by placing these would-be rural teachers in real open country schools under normal school supervision. Here these young people must live and learn how to teach right where their future problems are to come. All of this training does not

have to take place on the normal campus. More and more of it should take place in the open country where the real work is to be done.

3. The normal school should make arrangements for the rural teacher to do at least two-thirds of her practice teaching in a one-room rural school. Before practice teaching, she should observe in the training room of the normal school, in the demonstration school in the country if there is one, and in a "real" one-room school. In doing this she should look for the big points in method of instruction and compare, contrast, and discuss reasons for differences; then work out some suggestive constructive material for the different situations with a special supervisor for rural practice—one who knows rural schools thoroughly. These teachers should be made responsible for one or more specific things while they are attending the normal and not be treated as young children. In this way they will get more self-confidence. The entire faculty must be in sympathy with the rural department in the same or like degree that it is to the music and art departments or any other department.

4. Much time is put in at our rural practice teaching with a minimum of returns when there is no effective supervision by a competent critic teacher. We are aiming to put into each of our five associated schools some teacher of thorough training, high ability and wide experience. Each one could then do efficient, intensive, and richly helpful work with the rural students. . . . As a matter of course, we must have two continuous years in the rural course just as we require it for the other elementary teaching students. We know it is ridiculous to say a girl can teach in the hardest possible situation with one-half the preparation required for the type of position which is twice as easy. Until every normal school in our glorious land sets its standard there and demands salary and living conditions commensurate with these high qualifications, we are not going to get far in solving the rural problem. It is simply a matter of "redirected education" and the sooner Uncle Sam wakens to this fact, the sooner will Old Glory smile as triumphantly over the plowed field as it does over the factory. . . . Last, but not least, we need to awaken to the fact that it is in the first two years of their teaching that our students' fine flame of enthusiasm ashes over and dies down into mediocre teaching. We should provide for follow-up work—supervision by a normal instructor familiar with the ideals and practices which have been taught. This should be strong, steady, friendly help through these crucial years. Such practice would increase teaching efficiency and save many of our rural districts from disappointment and disaster.

5. There should be a good course in rural sociology and this must also involve field work given to a study of humanity and morality. There is much incidental instruction resulting from practice teaching in actual rural schools and surveys of real rural communities which is invaluable in the preparation of rural teachers.

SUGGESTIONS BY TEACHERS IN SERVICE.

Replies to the question: What, specifically, should normal schools do to make rural teachers ready for their work? were received from several experienced rural teachers now in service. Three of these replies are presented in full. The second and third are by teachers in charge of rural practice schools.

I. I believe that normal schools should provide:

1. A two-year course, after high school. (Not less.)

2. Special rural life curriculum. (*a*) Maximum attention given to thorough study of the subject matter of the elementary subjects; (*b*) minimum allow-

ance for electives; (c) emphasize country life problems; (d) encourage rural school visitation and observation; (e) practice teaching in (1) normal training school, and (2) standard rural school.

3. Discussions and lectures furnished by prominent men in the field.

4. Highest degree of rapport among faculty and whole normal school.

5. Opportunities for members of school boards to familiarize themselves with this department, thereby emphasizing to them the superiority of normal-trained teachers.

II. Somewhere in the course, the prospective rural teacher should catch the spirit (a) of Holmes: "I find the great thing in this world is not so much where we now stand as the direction in which we are going; to reach the port of heaven we must sail, not drift nor lie at anchor;" (b) of VanDyke: "This is my work, my blessing, not my doom;" and (c) of Kipling's Pioneer:

"There is no use going further,
It's the edge of cultivation.
So they said and I believed it,
Broke my ground and sowed my crop,
Built my barns and strung my fences,
In a little border station
Hid away beneath the foot-hills
Where the trails run out and stop.
But a voice as clear as conscience
Rang interminable changes
On one everlasting whisper
Day and night repeated, so:
'Something out there, something hidden,
Go and look behind the ranges,
Something lost behind the ranges,
Lost and waiting for you. Go!'"

It seems to me our normal schools fail to inspire a rural teacher with the greatness of the work to be done. Though I have all preparation and have not the spirit it profiteth nothing!

Subjects to be taught:

A. How to make a living: (a) Arithmetic; (b) geography; (c) language; (d) manual training; (e) domestic science; (f) agriculture, etc.; (g) hygiene. Normal schools are giving these attention, though much must be adapted to rural work by the teacher herself.

B. How to live a life: Increasing leisure time of farmer needs directing. (a) Music—good course in use of victrola, high-class music which will appeal to country people: (b) art—to teach appreciation of the beauty surrounding farmers; (c) nature study—birds, wild flowers, etc.; (d) literature—for school use, for adults, library work; (e) playground supervision; (f) rural life leadership—parliamentary law, and expression.

Other suggestions: Train teachers to judge textbooks and give opportunity to become familiar with many. Ideas for profitable busy work.

III. To me the most vital thing is to give would-be rural teachers a true, unvarnished idea of the bigness of their problem, the vast opportunities and the need of the highest, not just high, ideals to pass on to the children and to the community into which they go. In close relation with the above, it is only fair to point out the missionary aspect of the case financially and help them to go into the work not as a stepping stone to some other branch, but as a

means to better things in rural education and as an ultimate means to more specialized training of the community as well as of the school children, thus bringing about a better salary basis.

Of the more specific needs, the country teacher should develop an inquiring and discriminating power; in other words, she should cultivate common sense to meet the innumerable calls which come in the day's work. In order to do this she must have a thorough working knowledge of the subject matter adaptable to each grade, and she must know the characteristics and peculiarities of each grade as well as of each individual in the grade. I find the girls coming out to teach need a much keener appreciation of organization and management on the basis of economy of time. They themselves feel the lack of a close enough acquaintance with the best subject matter for the different grades, especially in reading. For instance, they may know that the Robin Hood stories are good, but they do not know that the ones arranged by Howard Pyle, and published by Scribner, are particularly good for the fifth grade, lending themselves well to dramatization, particularly in the country and woods. Perhaps if we were to have the students working with us a year instead of six weeks, this same remark would be made at the end of the time, but every student has come to me at the end of her student teaching and deplored the fact that the time was so short to put into actual practice the things that she had gained through criticism of her teaching efforts and from observation.

The teacher needs to have her mind trained and she needs also to have her eyes trained to see the beauties of nature beyond the muddy door yard; she needs ears which can hear the song of the meadow lark in spite of scuffling feet or electric organ, as the case may be; she must have the love for her work and for her children deep in her heart; as some one has said, she must know and appreciate "the good, the true, and the beautiful."

SUPPLEMENTARY SUGGESTIONS.

The work done in Kearney (Nebraska) State Normal School in preparing rural teachers is an excellent illustration of the evolutionary character of the progress which is being made, as it shows the curriculum in time requirements from the meagerest to the fullest for two college-year normal schools. The appended statement is taken from the annual catalogue for 1918, printed in the spring of this year.

RURAL EDUCATION, KEARNEY, NEBR.

By L. R. Sipple, Department of Rural Education.

SECONDARY COURSES.

Rural school management. This is a course for those beginning the study of rural education. A study is made of the aims, organization, and management of the rural school. The school system and the school law of Nebraska are studied. One semester. Text: Wilkinson, Rural School Management.

Principles of teaching. (Formerly Elementary psychology and principles of teaching.) This course should follow rural school management. It is an elementary study of the principles upon which good teaching is based, with special reference and application to teaching in rural schools. One semester. Texts: Strayer, A Brief Course in the Teaching Process, and Pyle, The Science of Human Behavior.

Rural school methods, observation and practice. The prerequisite for this course is principles of teaching. This course is a study of how to teach the several subjects in the rural school curriculum. Much time is spent in the observation of classroom teaching by experts and of actual practice teaching, by the student, in nearby rural demonstration schools. One semester. Text: Kendall and Mirick, How to Teach the Fundamental Subjects.

Open country recreation and games with handwork for rural schools. This course consists of instruction and practice in how to play and supervise folk-games, instructive indoor games for cold or stormy days, games that correlate with language and number work, games for the playground, etc. A part of the time is devoted to construction work suitable for the primary and intermediate grades in a rural school. One semester.

Rural community leadership. This course consists of a study of the problems of community leadership which confront every rural teacher. Special attention is given to the importance of social leadership and community center work. The course is based upon a study of elementary rural sociology. One semester. Text: Parts of Foght, The Rural Teacher and His Work.

COLLEGE COURSES.

High school normal training. This course is intended for those students who expect to teach high school normal training work in the high schools of the State or who wish a general view of rural education. It might well be called theory of rural education. It gives a survey of the entire field of rural education. The first part deals with the school law, school system, and manual for the normal training high schools; the second, with rural sociology; the third, with the organization and management of a rural school. Four hours credit.

Rural sociology. This course deals with the application of the scientific laws of sociology to rural social problems. Much laboratory work is done. Four hours credit. The course is based on Gillette, Constructive Rural Sociology, and Vogt, Introduction to Rural Sociology.

Rural school administration. This course is offered in the summer term only. It is intended for mature students or those having had experience in teaching, particularly for principals of rural high and consolidated schools, principals of village schools and county superintendents. The course deals with the administration of a school system from the standpoint of the State, the county and the local district in the United States and in Nebraska, so far as the rural schools are concerned. Four hours credit. The course is based upon Cubberley and Elliott.

RURAL DEMONSTRATION SCHOOLS.

For observation and practice purposes, there are three rural schools affiliated with the Kearney State Normal School in its rural education work: The Collins, the Glenwood, and the Victor School. Students in the department of rural education spend a definite amount of time in these schools observing and practice teaching. They are typical rural schools, well equipped and presided over by capable teachers. Each community is wide-awake and cooperates fully in the work of training rural teachers. The normal school, in return, assists in every possible way to make these schools highly efficient for the children.

Collins School. This is a modern two-room building, built to serve community purposes as well as school. It is a social center for the entire neighborhood.

Glenwood School. This community recently voted to build a community house and when completed it will be one of the best buildings of its kind in the State.

Victor School. This is a new building of the bungalow type.

KEARNEY RURAL CLUB.

The Kearney Rural Club contributes a definite part to the work of the department of rural education. It is a voluntary student organization to which all students in rural education are expected (though not required) to belong. It furnishes excellent training in community leadership and supplements the classroom work in practically all courses offered. It gives practice in planning and executing programs suitable for rural communities and helps to develop individual initiative. Students going out to teach find the work of the club invaluable to them in their community work.

RURAL EXTENSION SERVICE.

An extension service is maintained to help communities that are striving for better things. Lectures, lantern slides, social programs, music, talking machine use, plays, etc., are the means used. Assistance is given in rural church improvement, consolidation of schools, the building of modern rural school buildings, in grange work, in modern farm home construction planning.

THE ELEMENTARY RURAL COURSE.

FIRST YEAR.

First semester.		*Second semester.*	
Industrial geography	5	United States history for grades	5
Elective (reading and American classics or algebra)	5	Elective (reading and English classics or algebra)	5
General science	5	Agriculture	5
Industrial arithmetic	5	Hygiene and sanitation	5
Drawing		Music	

SECOND YEAR.

First semester.		*Second semester.*	
Civics (including history and geography of Nebraska)	5	Farm accounting	5
English (composition and orthography)	5	English (grammar)	5
Domestic science (girls) or agriculture (boys)	5	Manual training	5
Rural school management and rural sociology	5	Elementary physchology and principles of teaching	5
Penmanship		Rural school plays and games and handwork	

On completion of this course a rural elementary certificate is issued by the normal school. This certificate is good for three years in any rural school in Nebraska. It may be renewed.

This certificate includes all the subjects now required for a second-grade county certificate and in addition: Domestic science, manual training, general science, playground supervision, handwork, rural school management, rural sociology, elementary psychology, and principles of teaching. All subjects in

the course are taught from the standpoint of the rural school by experts in the various departments of the normal school. The elementary rural certificate is given without examination to those who finish the course prescribed above.

All students who enter the elementary rural course must be 16 years of age and have completed the eighth grade of the common schools or its equivalent. Those who have completed the ninth grade or its equivalent may enter the course and complete it in one year. In this part of the State the demand is for at least four years of high school training for rural school teachers.

THE ADVANCED RURAL COURSE.

FIRST YEAR.

First Semester.		*Second Semester.*	
Elective mathematics or industrial work	5	Elective (mathematics or industrial work)	5
English (rural school literature)	5	English (industrial English reading and classics)	5
Rural school management	5	Rural leadership (or principles of teaching, etc	5
Physics I	5	Physics II	5
Music		Drawing	

SECOND YEAR.

First Semester.		*Second Semester.*	
European history (or industrial geography)	5	European history (or United States history)	5
English (public speaking or expression or dramatics)	5	Manual training	5
Botany	5	Agriculture	5
Principles of teaching and methods with observation (or leadership)	5	Observation and practice	5
Rural plays, games and handwork		Penmanship and rural school library methods	

To graduate from this course each student must have credits for one or more semesters in each of—agriculture, manual training, and domestic science; excepting young men, who may take an additional semester in agriculture or manual training instead of domestic science. Where possible, students in this course may take four subjects chosen from the following: Grammar; composition and orthography; reading and classics; industrial arithmetic; industrial geography; farm accounts; United States history.

Those who have completed the tenth grade in high school and who must teach in one year, may take an elective course chosen from the above advanced rural course and receive an elementary rural State certificate. Such students may complete the advanced course in one additional year.

Those who have finished the eleventh grade in high school may complete the advanced rural course in one year and one summer term.

All those who complete the advanced rural course will receive a first-grade rural State certificate and after three years of successful experience shall be entitled to a professional rural State certificate good for life. These certificates are also good in village and town schools of the State.

The advanced rural State certificate includes all the subjects now required for the first-grade county certificate and in addition: Domestic science, manual training, playground supervision, European history, music, rural school library

methods, public speaking, rural school management, rural leadership, and a year of methods, observation and practice in typical rural schools under expert supervision. In addition, all students become members of the rural club where rural community leadership is demonstrated.

SPECIAL DIPLOMA.

Rural High School Teachers' Course.

FIRST YEAR.

Psychology	4	Biology or nature study	4
English	4	Electives (rural industrial subjects)	7
Electives (rural science)	7	Music (drill)	3
Drawing (drill)	3		
Rural sociology	4		

SECOND YEAR.

Teaching	5	Teaching (in rural schools)	5
History of education and adolescence	4	Electives	10
Electives	6	Reviews	4

CERTIFICATES ISSUED (REQUIRED BY STATUTE).

We issue three certificates now. One, on completion of equivalent of tenth grade plus professional work called "Rural Elementary State Certificate" and good for three years. (We are not pushing this course.) One, on completion of equivalent of twelfth grade plus professional work, called First Grade Rural State Certificate and good for three years; becomes life certificate after three years of successful experience. One, on completion of the first year of college work, for those who must teach before completion of course, called Elementary Certificate and good for one to three years. Holders usually find places in tenth grade rural schools. On completion of the second year of college work, by choosing electives suitable, a special rural high school diploma is offered. This diploma is expected of all who teach in rural high schools.

PRACTICE TEACHING, MILWAUKEE, WIS.

By C. E. Patzer, Department of Supervision.

The total number of students for whom practice teaching is provided each year is about 430. This number is composed of various groups for whom differentiated practice teaching has been provided. There are students who are specializing to teach in:

1. Kindergartens. 2. Primary grades. 3. Grammar grades. 4. Schools for the deaf. 5. Departments of manual training and drawing in high schools and elementary schools. 6. Departments of music in high schools and elementary schools. 7. Elementary schools demanding the ability to teach German. 8. High schools, as assistants or principals. 9. State graded schools, as principals or class teachers. 10. One-room country schools.

The students in the kindergarten group do their practice teaching in the kindergartens of the city schools, in the mission kindergartens, and in the kindergartens of the elementary school connected with the normal school. They devote each morning for 18 weeks to practice teaching.

2 and 3. The students in the primary and grammar groups devote 18 weeks to practice teaching, all of which is done in the city schools of Milwaukee. This semester we are practicing in 52 of the Milwaukee schools. The students report at the time the regular teachers report in the morning, and remain until the close of school, that is, 12 o'clock. Each group gets from three to four or five periods of teaching during the morning, aggregating not less than 100 minutes nor more than 120 minutes of actual teaching. The students, however, assist the class teachers during the special-help period of half an hour, which time is not included in the so-called regular teaching.

4. The students qualifying to teach in the schools for the deaf devote 18 weeks of half-day practice teaching in the school for the deaf in Milwaukee, and 9 weeks of half-day teaching in the grades of the city schools. The diploma issued to graduates of the school for the deaf, which is a course of three years, authorizes them to teach not only in schools for the deaf but also in elementary schools in the State.

5. The students in this group pursue the three-years course in the art school and spend 12 weeks of half-day teaching in two large elementary schools just outside of the city limits of Milwaukee. They virtually teach most of the time, reporting when the regular teachers report and leaving at the close of school at noon. The teachers qualifying for work in manual training get their practice teaching in the manual training centers of Milwaukee.

7. Group 7 is a small group. The students in this group also get their practice teaching in the city schools of Milwaukee.

6 and 8. The students who are qualifying to teach in departments of music in high schools and elementary schools, or who are qualifying as high school assistants or principals, get their practice teaching in the high schools and elementary schools in cities and a few large villages within a radius of 50 miles of Milwaukee. They devote 12 weeks to this practice teaching, reporting to the schools the entire day for the entire period of their practice work. This necessitates that the students temporarily make their homes in the cities or villages where they do their practice teaching.

They do part of their work in the high school and part in the elementary school connected with the high school. This is done for the reason that the teachers of music are expected to cover all the grades and the high school, and the students qualifying for what might be called regular high school teaching will, upon graduation, secure diplomas qualifying them to teach not only in high schools, but in the grammar grades of elementary schools. I may say that the course for these groups is three years. The course for the group of students qualifying for regular high school work within the next year will be extended to four years.

9. The students qualifying for the principalships of State graded schools get their observation and practice teaching in State graded schools within a radius of 20 or 30 miles of Milwaukee. These students spend 12 weeks, all day teaching, in these schools. Naturally these students also take up a temporary residence during the period of their practice teaching, in the villages in which this work is done.

10. Students qualifying for teaching in one-room country schools are divided into two groups: The one group teaches the first 6 weeks of the last 12 weeks of the year; the other group, the last 6 weeks of the last 12 weeks of the year. This is also all day teaching. Naturally the teachers with whom these students work give them some time for observation and some time for the preparation of their work for the next day. Last year we placed students in some 30 different rural schools of Milwaukee, Ozaukee, Washington, Waukesha, and

Racine Counties. The students placed in State graded schools were also placed in these counties.

SUPERVISION OF PRACTICE TEACHERS.

We have three supervisors who devote all their time to the supervision of practice teaching in the grades of the city schools, the rural, State graded, and high schools; and three others who devote half time to this work. Besides these supervisors there are three supervisors who devote a half day each to the supervision of the kindergarten teaching in the city schools of Milwaukee. The practice teaching in the State graded schools is done in the fall of the year. For the supervision of these schools, one of the regular supervisors is released who devotes all of his time to the supervision of the teaching in these schools. The practice teaching of the students qualifying for high school teaching and for the teaching of music in the high schools and elementary schools is done the second 12 weeks of our school year. When this teaching is in progress, one man is released for this supervision, but usually it becomes necessary to release one other person for part time supervision of this work. One of the teachers of the art school attends to the supervision of students doing practice teaching from that school.

The supervisor of practice teaching, that is myself, supervises the work of every practice teacher at least once.

Possibly I should have said in the beginning of this article that the 430 students who do practice teaching during any one year are divided into two groups—the one group doing its teaching the first half of the year, that is the first 18 weeks, and the other group doing its practice teaching the second half of the year. This grouping is rather artificial in character, for in the first group, that is the group doing their teaching the first semester, are all included who come from outside the city of Milwaukee. During the second semester, students who live in Milwaukee get their practice teaching. This grouping was made necessary for the reason that students coming from the outside naturally will teach outside Milwaukee, in the cities of the State. Their work, for this reason, should be completed by the end of the first semester so that their records of teaching may be made up by that time, and that when principals and superintendents come to the school in April, May, and June, for teachers they may meet personally students who have finished their practice teaching.

RELATIONS EXISTING BETWEEN THE MILWAUKEE STATE NORMAL SCHOOL AND THE VARIOUS SCHOOLS IN THE CITY OF MILWAUKEE AND IN THE COUNTIES ADJOINING MILWAUKEE COUNTY.

I may truthfully say that the relations existing between the Milwaukee Normal School and the various schools in which practice teaching is done is of a most cordial kind. To be sure, the system of practice teaching obtaining in Milwaukee has been tested out during the past 20 years. The board of school directors authorized our going into the public schools of Milwaukee for practice teaching and the superintendent, assistant superintendents, special supervisors, principals, and grade teachers of the city system of schools are all in hearty accord with the practice teaching done in the city schools. They are of great assistance to the normal school. When some little friction does manifest itself, as occasionally happens, the supervisors or the supervisor of practice teaching of the normal school "pours oil on the troubled waters."

The practice teaching as done in the one-room rural schools has been tried out for three years. We had very little trouble in securing the cooperation of

county superintendents, district boards, and the rural teachers. In making arrangements for this teaching we endeavored to get into the larger district schools, and it soon became evident to the teachers in these schools and to the district boards that we were of considerable service. This possibly explains the welcome which we received in these schools.

This is the third year that we are using the State graded schools for practice teaching, and it is also the third year that we have gone into the high schools with our prospective high school teachers.

I believe I am safe in saying that the system that has been introduced has come to stay, at least for a number of years. It has its disadvantages but also it has decided advantages. Through the system of practice teaching the Milwaukee Normal School has become a part of a much larger community than ever before, which community is beginning to realize how helpful it can be in properly training normal school students for the important work of teaching.

CLOSE CONTACT WITH RURAL LIFE.

By Macy Campbell.

Iowa's greatest natural resource is her fertile farm land. Few spots on the globe have been so carefully prepared by nature to be the home of a great agricultural people. A large and vitally important part of Iowa's population will always live on the land.

Two very difficult problems confront those who are interested in the progress and future strength of rural Iowa: First, how may we encourage a fair share of our most capable, ambitious, and best educated young folks to live on the land? Second, how may we encourage a fair share of our most capable, ambitious, and best educated teachers to give a lifetime of service in the schools that belong to the land?

It seems probable that these problems will never be solved permanently until they are solved in the spirit of American democracy which recognizes the right and privilege of each individual to prepare himself for and enter that occupation which holds out to him the largest opportunities for success, prosperity, and happiness.

James A. Garfield, teacher and statesman, pointed out that in America we have no horizontal stratifications of our democracy with layers of stone to hold men down, but rather the mobility of the sea where every particle is free to move and rise to glitter on the crest of the highest waves. Realizing this fundamental truth, we see that a fair share of our most capable, ambitious, and best educated young people will not choose to live their lives on the land until life on the land is so reorganized and improved that it offers opportunities equivalent to those found anywhere else. A fair share of our most capable, ambitious, and best educated teachers will not choose to give a lifetime of service in the schools that belong to the land until those schools are so reorganized and improved that they offer as good an opportunity for a successful professional career as any other schools anywhere.

A recent inquiry made by the writer into the reasons why many of the most capable teachers in the State gave up teaching in rural schools at their first opportunity, disclosed the fact that these energetic, capable, well-educated teachers found teaching in a rural school to be a blind-alley job offering no opportunity for a professional career comparable to those offered in other teaching positions. So the children of the land are constantly denied the opportunity to associate with the strong, vigorous personalities and the best educated minds in the teaching profession. This tendency of the most capable,

ambitious, and best qualified teachers to go where the best opportunities are is already showing itself among the graduates of the rural teachers' course and is taking some of the most promising teachers, specially trained for rural schools, into town and city schools offering superior advantages.

The comparatively small number who graduate from the rural teachers' courses in proportion to the large numbers enrolled in these courses is due to the fact that many of these young teachers, just in the pinfeather stage, are planning on using the rural school merely as a stepping stone to teaching positions offering greater opportunities. Hence, they drop out as soon as they are able to meet the legal requirements to secure certificates, feeling that the opportunities offered by the rural school do not warrant larger investment in education.

It is axiomatic that as the teacher so is the school. No school can be permanently strong and successful until it can attract and hold strong and successful teachers. Those who have studied the matter are profoundly impressed with the fact that in some way rural life and the rural school are very closely bound up together. They are the inseparable Siamese Twins of Iowa—neither can advance any farther than it can carry the other with it.

Recognizing this fact, the department of rural education accepts the double duty of attempting to train better teachers for rural schools and at the same time of encouraging farming communities to develop better conditions. To this end, every possible opportunity is seized by members of the department to keep in close touch with the people on the land, to gain their confidence and good will and through this close contact discover every possible avenue of advance. Some practical means of keeping in this close contact with conditions on the land has been found as follows:

1. Rural life surveys conducted by members of the department.

2. Boys' and girls' club work and school home gardens in the territory served by the demonstration schools.

3. Community center meetings in the demonstration schools.

4. Service rendered by members of the department, as members of the County Council of Defense's Seed Corn and Hog Survey and Garden Committee.

5. Assistance by all members of the department in the organization and conduct of the school thrift campaign in Blackhawk County.

6. Intensive study of conditions in the rural demonstration schools. These schools serve as research laboratories for the department of rural education as well as training schools for rural teachers, and the amount of time spent in them by members of the department is not necessarily proportional to the number of student teachers in training.

COMMUNITY CENTER ORGANIZATION.

By Macy Campbell.

The steps suggested here are those which have been found most successful by the department of rural education in four years' experience in developing community center organizations in schools where the movement is new. There are now 35 such community-center organizations in successful operation in rural schools, village schools, and consolidated schools.

1. The teacher should visit in as many homes as possible and invite the patrons to attend a community meeting at the school to see something of the work of the school. Visit all the homes in the district, not simply those represented by children in school. It is a community meeting that is desired. Invite all the people.

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A SURVEY MADE UNDER
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FOREWORD BY THE SURVEY COMMITTEE.

With cities, as with men and women, judgment should not be rendered on achievement alone, for the will to achieve and the effort to achieve, in the end, count for more than mere accomplishment. In the attempt to measure the educational progress of any city, then, account should be taken of the difficulties which have been encountered, the effort which has been put forth in overcoming these, the distance traversed from the starting point. Moreover, there is no one best way known in anything educational. There are some ways which are better than others, but many of the ways which are considered best to-day will be discarded within 10 years, just as many of the practices which were thought best a decade ago are now in disrepute. The educational process is not static; it is not a cut-and-dried affair; it is not a dead thing; it is alive, and as everything which is alive is constantly changing, so it is with education. It can not be learned in a normal school, nor in a university; it can not be gotten out of a book, nor from the pages of a journal; these merely help. In fact, the educational process can not be gotten anywhere, for it is incessantly shifting, changing, growing; it is in a state of flux, to-day something, to-morrow something different, and the next day something else.

This is true because educational ideals and consequent practice are merely expressions of the way the mind of the group thinks about how its young should be trained. There can not be any question that the community group has a mind. The politician knows it; so does the reformer; so does the preacher; and the educational leader for each continually appeals to this community mind, trying to enlist its interest, trying to secure its indorsement of his proposals, trying to get it to put these into practical effect. The community mind, usually, is not so variable as the mind of the individual; it is more conservative, harder to convince, less emotional about the things which secure its attention, and it takes a more impersonal view of matters which interest it; nevertheless, it does change its view. It can be influenced by individuals, and it does respond, though slowly, to the social mind of community groups outside itself. Because it is changing its conception of its own needs, and thereby its conception of the educational needs of its youth, so, of necessity, must educational practice change in conformity thereto. It is foolish, therefore, for anyone to say dogmatically what educational practice should be, for no one

knows what it should be, because no one knows what the social mind of the larger community, which is bigger than any local community, is going to think about its own needs and the best ways of training its youth to meet them.

Mindful, then, of these facts the survey committee has not undertaken, in arbitrary fashion, to tell Columbia what her school system should be, nor how near the ideal in accomplishment she is, nor how far away from it. This committee is not competent to define the ideal school system nor the ideal school practice. It can, however, bring to Columbia's attention those practices which are generally held by other communities, for the present, at least, to be the best. It can compare and contrast Columbia's accomplishment with that of other communities in respect to these better ways. It can examine the difficulties which have confronted Columbia in creating her system, and can compare the effort which she has made to overcome her handicaps with that made by other cities. It can determine how much of the interest that touches the pocketbook the citizens of Columbia are taking in their schools. It can determine, too, whether the teachers, school officials, and citizens of the community are resting in self-satisfied pride of accomplishment or whether they are eagerly seeking on every hand to burst through the bonds of their limitations. It can tell whether teachers are availing themselves of every opportunity at hand for self-improvement, and if not, it can point, perhaps, to some of the conditions which have inhibited effort. It can tell whether the teachers are wisely and inspiringly led into new pathways of educational progress, the treading of which brings an influx of new strength and the daily renewal of satisfaction. It can tell whether the conditions under which the children are working tend to establish in the consciousness of each the habit of success, or whether the school is starting the child on a career characterized by the thought of failure. In short, the committee feels that it lies within its proper province to determine, inferentially at least, whether Columbia's school system in all of its parts is a live thing, growing, functioning, making blunders perhaps, but dynamic nevertheless, or whether the forces prevail which tend to bring about a static condition.

To the study of these questions the committee has come with the utmost sympathy, but with a desire to speak the truth with complete frankness. In its effort to get at the facts it has received the unhesitating cooperation of the school commissioners, the superintendent, and the entire school corps.

In its recommendations the committee has been careful to suggest nothing which has not been thoroughly tested in other communities and has not become a part of established practice. The committee feels that Columbia can afford to give to her children an

educational opportunity which is the equal of that offered by the most favored cities of her class. Its recommendations have been made with this objective clearly in view. It will be impossible, and indeed, undesirable, to attempt to put into immediate effect all of the suggestions which the committee offers. The committee feels, however, that as the board of school commissioners develops its plans for the future of the schools of Columbia, it will make no mistake if it gives objective expression to this suggested program.

In justice to the superintendent of the schools the fact should be mentioned that from time to time in his annual reports to the board of school commissioners he has suggested many of the things which this committee recommends.

The survey was made by the United States Bureau of Education at the request of the Columbia board of school commissioners. The survey committee comprises the following members:

Frank F. Bunker, Bureau of Education, director of the survey.
Carleton B. Gibson, superintendent of schools, Savannah, Ga.
Henrietta W. Calvin, Bureau of Education.
J. L. Randall, Bureau of Education.
H. H. Baish, Bureau of Education.

THE PUBLIC SCHOOLS OF COLUMBIA, SOUTH CAROLINA.

I.—THE CITY OF COLUMBIA, SOUTH CAROLINA, AND THE RISE OF THE PUBLIC-SCHOOL SYSTEM.

1. THE CITY OF COLUMBIA.[1]

The city of Columbia stands at the confluence of the Broad and Saluda Rivers, where they break through the irregular, sand hill belt which extends across South Carolina midway between the Blue Ridge Mountains and the coast, paralleling them both. The early history of this region is a story of bold hunters following herds of buffalo and the trail of the deer into territory previously unknown; of trading parties bartering at Indian camps for furs and hides; of terrified women and children scurrying to the forts which had been established at various points for protection from marauding Indians; of punitive military expeditions pushing into the interior from Charleston and returning decimated by fever, plague, and hardship; and of appeals to the English governor, representing the provincial government, for guns, ammunition, and military protection. Then came a period when settlements began to spring up at various points—a group of Scotch-Irish immigrants on the northeast bank of the Congaree, in what is now Richland County; a group of Germans on the Broad, at the mouth of Kinslers Creek; some German and Swiss emigrants from Orangeburg settling at the juncture of Little River, Cane Creek, and Kinslers Creek; and immigrants from Virginia. The largest and most important settlement of all these came to be known as "The Congarees."

A ferry across the river was installed at this point; flour mills of primitive character were established; a line of 30 to 60 ton boats was put on to ply between the settlement and Charleston; and by Revolutionary times the community had developed a group consciousness, for it is of record that during this period the settlement demanded that the district be divided and a court established, urg-

[1] Many of the facts contained in this historical sketch were taken from a compilation made by John M. Bateman and entitled "A Columbia Scrapbook."

ing, in support, the fact that the settlement was nearly 40 miles "from the shire."

After the capture of Charleston by the British in 1780 Lord Cornwallis was sent into the interior to clear the region of hostile troops and to establish military posts on the frontier. Coming to the Congaree, he seized a house near the ferry, raised a parapet about it, arranged his batteries, cut down trees and constructed an abatis, and called the finished work "Fort Granby," after the Marquis of Granby, on whose staff Cornwallis had once served. After the Revolution a town called Granby sprang up around the fort; and as it was at the head of navigation on the Congaree, with a ferry leading to the up country, with broad and fertile swamp lands extending many miles below, Granby came to be a place of considerable business, with a population comprising a circle of well-to-do, refined, and educated people.

By a treaty with the Cherokees, in 1755, Gov. Glen secured a large addition to the territory of the Colony out of which the counties of Edgefield, Abbeville, Laurens, Newberry, Union, Spartanburg, York, Chester, Fairfield, and Richland (embracing the site of Granby), were later formed. Into this new territory settlers came rapidly from Pennsylvania and Virginia, but a wide belt of uninhabited country separated these communities from Charleston, the seat of government, which was the only place at which the court was held or the general assembly convened. In consequence of the hardships endured by those of the "upper country" in reaching Charleston, the demand for a more centrally located capital became insistent. In 1785 the matter was first considered by the general assembly and a committee was appointed to recommend a meeting place for the legislature. After much discussion and over the protests of the people of the "lower country," a bill was put through during the session of 1786 which, when finally amended, provided for the election of a body of legislators who were authorized to select a tract of land near the Congaree ferry, 2 miles square; to break it up into lots of a half acre each; to reserve 4 acres for public buildings; to sell one-fourth of the lots; whereupon a contract was to be let for the erection thereon of a statehouse.

Every purchaser of a lot was obligated to build thereon, within two years, "a good two-story wood or brick house, with brick or stone chimneys, not less than 30 feet long and 18 feet wide in the clear," or failing therein to forfeit the lot. No name was provided for the town, but a blank space was left in the bill to be filled by the legislature when the name should be determined. One senator suggested, in derision, that the new town should be called the "Town of Refuge" because, as he asserted, the town was to be erected at a point "without the pale of justice, situated in a place where sheriffs

were harmless and inoffensive, and where laws were laughed at and despised." The names finally voted upon were "Washington" and "Columbia." The latter receiving a majority vote was declared to be the name of the new capital. When the constitutional assembly was held in 1790 an attempt was made to have the capital removed to Charleston, but by a margin of one vote it was decided to retain Columbia permanently as the seat of government.

During the first 19 years of its existence, the town of Columbia was governed by commissioners elected by the legislature, but in 1805 the growth of the population and the need of making and enforcing many local regulations raised so many questions of detail with which the legislature could not properly be occupied that authorization was granted for the incorporation of the town. By 1842 a new era had opened, for in this year the railroad pushing out of Charleston finally reached Columbia. Since the coming of the railroad and the things a railroad always brings to a community, the growth of Columbia in population and prosperity has been steady, interrupted for a time by the bitter struggle of the Civil War and the accompanying desolation and destruction, but now firmly established upon a solid economic basis which points unerringly to a promising future.

To-day Columbia is a city with a population of about 40,000, with a property assessment roll of $15,500,000; with bank deposits aggregating $11,000,000; and with bank clearings of $1,000,000 per week. Railroads radiate in 11 directions and furnish 144 regular trains daily; there are 25 miles of street car track; 90 miles of sewers; a modern water plant insuring good water at high pressure; a 25,000 horsepower electric plant; 9 hotels; 10 colleges; 11 public schools; 450 miles of modern sand-clay roads radiating to every part of the adjacent territory. Columbia is also rapidly coming to be an important factor in manufacturing enterprises; 79 establishments with a combined capital of nearly $12,000,000 are situated either within the city limits or very close thereto. In 1916 the value of the output of these factories reached $15,000,000. The cotton goods alone manufactured in one year, if put together yard by yard, would reach around the earth once and with 500 miles left over on the next lap. There are to be found here also 3 "skyscraper" office buildings of 10, 12, and 15 stories, respectively; 51 churches representing many religious denominations; a six-story Young Men's Christian Association building with 83 rooms in its dormitory; a Young Women's Christian Association building; a chamber of commerce; and a $265,000 Government post office in course of erection.

Moreover, it should be noted, Columbia is situated at the center of a large and prosperous rural district. Its location, at the southeastern edge of Richland County, makes it not only the natural busi-

ness center of Lexington County as well, but the natural distributing point, also, for a large territory embracing portions of adjacent counties. A circle having a diameter of 100 miles with Columbia at the center would contain the whole or a part of 14 counties comprising from 20 to 30 thousand farmers who are tilling property having an aggregate value of $100,000,000. Within this area the capital invested in agricultural pursuits is far greater than that invested in all other enterprises combined.

2. THE RISE OF THE PUBLIC-SCHOOL SYSTEM.

By action of the general assembly, taken in December, 1880, the State school law of 1878 was amended and provision made whereby the area embraced within the corporate limits of Columbia became a separate school district. This act placed the management and control of the new district in a board of school commissioners consisting of five members, one to be selected from each of four wards of the city (when the commission form of government was adopted and the wards abolished the commissioners were elected at large) and the fifth to be selected by the city council from among their own number. In 1883 the number was increased to seven, the two additional members being appointed by the governor upon the recommendation of the trustees of Columbia Academy. In addition to the usual duties devolving upon school commissioners, authority was given the board to hold, annually, an election for the purpose of levying a local tax on all real and personal property for the maintenance of the school system. Under the act an election for school commissioners was held in January, 1881. The new board, in turn, very soon called an election to authorize the levying of a special tax for school support, but the measure was defeated. A second call was made the year following, but again the greatly needed maintenance was withheld. To quote the official report of 1883–84:

> At this time the condition of the city schools was deplorable. The school fund apportioned to the city from the county was totally inadequate for their proper support. The accommodations for white pupils were utterly insufficient, and the attendance upon these schools—never very great—dwindled down to a very small number. Very few of the citizens of the community availed themselves of these schools. The total attendance for the past two years had scarcely averaged 500, and of these a large majority were colored children. The length of the school session was but a little over three months. As the general school fund of the county is distributed in each school district in proportion to the number of children attending the public schools in that district, it follows that as the school attendance falls off, the revenue of the school district falls off in like proportion. As a result of this state of affairs, although the City of Columbia pays into the general county fund about $7,500 annually, yet on account of the small attendance on the public schools the city has been yearly receiving in return scarcely over $1,700 as its proportion of this fund.

This situation led to a systematic attempt to get before the voters of the district the deplorable condition the schools were in, with the result that public interest in the school movement became aroused to an extent "never before known in the city," with the consequence that, upon making the third attempt, in January, 1883, a local tax for school purposes of 1 mill was authorized.

Early in the same year, 1883, the board took up the problem of school organization. At the time the board controlled only two buildings—the Sidney Park School for white children, and the Howard School for negroes. The first step in meeting the difficulty of inadequate room was taken by making an appeal to the trustees of the male and female academies (Columbia Academy) for the use by the white children of the city of the two buildings controlled by them.

The board of trustees of Columbia Academy, it should be stated, is a self-perpetuated board created by the legislature of 1792 for the purpose of establishing a free school in Columbia. The act provided that the commissioners of Columbia convey, for the purpose, to the first board of trustees and to their successors "as trusteees for the free school at Columbia," one of the "outsquares" or squares outside a certain exempted area, of 4 acres of land which were reserved for the use of the public. In 1795 a legislative committee appointed to consider the matter recommended that the trustees (of the academy) "may be authorized by law to raise by lottery a sum of money not exceeding 1,200 pounds to enable them to carry the said laudable institution into effect." Three years later an act was passed providing that the funds arising from taxes, licenses, fines, etc., should be applied to keeping the market in repair, opening and keeping in repair certain streets, payment of salaries, and the surplus, if any, was to be paid over to the trustees of the academy to be used by them for the interests of the institution in whatever way they deemed best. Further maintenance support was obtained through a provision that half of the profits accruing from the ferry across the Congaree, which had been established in 1799 to take the place of the bridge destroyed by the flood of 1796, should go to the academy.

For a period of years the male academy was situated on Sumpter Street, between Blanding and Laurel, while the female academy was erected three blocks distant on the site of what is now the public high school. The male academy was moved later, however, to a site donated by Gov. Taylor, and which comprised the block bounded by Laurel, Richland, Pickens, and Henderson Streets. Here it remained until 1905 when it was removed to make way for the present Taylor public elementary school.

This was the situation when the board of school commissioners petitioned the trustees of Columbia Academy for the use of the two

buildings which were under their management, urging in support of their request that the proposed public school organization would better meet the object of the founders to provide for the education of the people of Columbia in the broadest and most permanent sense; that there were no subjects taught in the best private schools which might not properly be included in public school instruction; that the public schools admit of better gradation, more economical instruction, and greater efficiency; and that it is proposed that the lower grades shall be free to all, though the higher grades "may for the present, at least, be supplemented by a small tuition fee."

The request was granted, and the two academy buildings were leased to the school commissioners for a term of years. This arrangement continued until 1894, when the property was conveyed to the school board in perpetuity upon the payment of a yearly sum of $100 for a period of 10 years and on condition that there shall be at all times at least two members on the board of city school commissioners who shall have been nominated by the trustees of the Columbia Academy and commissioned by the governor. The Columbia Academy board of trustees still exists, though without property or duties other than to name two members of the school commissioners.

Thus there came into the control of the school board engaged in the task of organizing the school system adequate buildings for the time and with no more than a nominal expenditure of funds. At the same time a contribution of $1,000 was made from the Peabody fund to be applied to the salary of a superintendent. A superintendent familiar with the plan of graded schools was soon secured, Mr. David B. Johnson, a Tennesseean, and at the time superintendent of schools at Newbern, N. C. On September 28, 1883, the older boys of the city assembled at the male academy building; the girls and the younger boys at the female academy building; the negro pupils, both boys and girls, at the Howard building; and the public school system of the city was launched.

To quote from the report of 1883-84:

> On Friday, the 28th day of September, the day of the opening, the city bell struck 13 strokes at 8.30 a. m. as a warning, and in obedience to the summons the children began to flock to the several school buildings from every quarter of the city. Promptly at 9 o'clock the opening exercises were held in every schoolroom. Until 2 o'clock the regular routine was proceeded with, and some recitations were had. Thus it was that provision had been made in advance for every pupil who entered, and 930 children—550 white and 380 colored—presented themselves on the first day and were accommodated without delay, confusion, or inconvenience.

Prior to the opening day, and preparatory thereto, the board had adopted a plan of school organization which embraced among others the following features: An annual election of teachers whose qualifications should be reviewed by the superintendent; a nine months'

session with the promotion of pupils made annually and determined by a formal written examination held during the next to the last week of the school year, followed by a public oral examination during the last week; a detailed course of study covering 10 years or grades, the 3 upper being considered high-school grades; a list of textbooks to be purchased by the pupils; a single session each school day, from 9 a. m. to 2 p. m., with two 15-minute recesses; the holding each month by the superintendent of a three-hour meeting of the teachers "for the purpose of conducting a systematic course of study prescribed by him"; a tuition fee of $2.50 per month for all children of high-school grade—that is. all above the seventh; and the appointment of an official "board of visitors," consisting of the mayor and the aldermen of the city, which body was expected to visit the schools from time to time and suggest means for promoting the efficiency and success of the schools.

II.—ARE THE SCHOOLS OF COLUMBIA ADEQUATELY SUPPORTED?

1. THE EARLY STRUGGLE TO ORGANIZE THE SYSTEM.

The system was not inaugurated without a bitter struggle extending over several years and contested at every step by citizens who protested against "taxing one man's property to educate another man's child." Indeed, the movement toward a State-supported, State-controlled system which would provide free schooling for rich and poor alike was retarded in South Carolina as in other Southern States. From colonial days well-to-do families had attended to the education of their own sons and daughters, in many instances sending them abroad for their training. To meet the need of those who prized education, yet could not afford the expense of European schools, a swarm of private pay schools had arisen. It had long been the policy of the State to leave elementary education to the parents, and of the poor particularly to private and parochial efforts, and to associations, such as the Hibernian, the German, and other societies of national scope.

In 1811 the State provided a fund the income from which was to secure to every citizen the benefits of an education, but it included the unfortunate provision that "if the fund should prove inadequate for all applicants, preference should be given to the poor." The fund was small and was entirely absorbed by the preferred class. Children of the well-to-do were excluded, and the schools, in so far as they were independent institutions, degenerated into pauper schools. Only those could avail themselves of the benefits of the measure who accepted it as charity or who made a declaration of pauperism. Not until 1868 was constitutional provision made for the appointment of a State superintendent and for the establishment of "a liberal and uniform system of free public schools throughout the State."

In part, then, due to a strong sentiment favoring private-school instruction or instruction within the family by means of tutors; in part due to the stigma of pauperism which the schools inherited from a former period; and in part due to the impoverished condition of the South following the war and from which the country was slow in recovering, support of public schools was reluctantly given and in meager amounts only. Indeed, in Columbia long before the close of the first year's session the maintenance fund was completely exhausted. The 1-mill tax, so begrudgingly allowed, yielded but $3,200 and much of this had to be expended in rehabilitating the two

buildings which the trustees of Columbia Academy had permitted the school commissioners to occupy. These buildings were constructed so as to house the teachers and their families on the upper floors, while but two rooms on the ground floor of each building were reserved for classroom purposes. Inasmuch as the tax levy had been secured with the understanding that a nine months' term would be held, it was felt that failure to keep open for the stipulated time would mean a loss of confidence endangering a levy for the following year; so special efforts were made to keep the schools running for the designated time. Interested parents contributed amounts; the city council appropriated $900; and friends in Columbia and elsewhere supplemented these sums with a sufficient amount to enable the school officials to meet all of their obligations.

2. EFFORTS TO OBTAIN SUITABLE BUILDINGS.

This ultraconservative attitude of the citizens of Columbia in respect to adequate support of their schools is well illustrated by the story of the efforts made to secure proper seating facilities for the children of the city as the population increased. Though the public-school system was organized in 1883 and housed in borrowed buildings, it was not until 15 years later, in 1898, that any provision was made for additional buildings, and even then only a two-room building known as the Blossom Street School was erected. In 1903, or 20 years after the organization of the schools, the equipment consisted of but five buildings valued in the aggregate at $22,500; furniture valued at $4,000; and school lots worth about $27,000. The situation was so bad as to lead the superintendent to say in his published report of that year:

> Well-informed persons have stated that South Carolina has the poorest school buildings in the United States, and that Columbia has, for a city of its importance, the poorest buildings in South Carolina. It is humiliating to say it, but this statement is unquestionably true, especially with reference to Columbia.

Three years later, in his 1906–7 report, the superintendent again speaks of the inadequacy of building facilities saying:

> In recent years, the city has spent $700,000 on permanent improvements, but of this large amount only $50,000 was used in the construction of new schoolhouses. The record, then, is that 93 per cent of the funds invested by the city in permanent improvements during the past 10 years was used in constructing sidewalks, engine houses, opera house, sewers, and waterworks, while only 7 per cent went to school buildings. It is doubtful if this showing, as discouraging as it is, would have been made, had not the school board appropriated half the amount used for the erection of the schools from the regular income to the schools, while the teachers were being paid salaries sufficiently small to make living a burden sufficiently large to prevent them from concentrating their best efforts on their school work.

Efforts to arouse the public to a sense of the worth of their schools and to the realization of a need for proper buildings of a modern type were made from time to time, but yielded no tangible results for 22 years. In 1905, however, a building program was entered upon which gave, within the next 12 years a group of new buildings, for the most part, well lighted, well ventilated, with proper means for adequate heating, with modern sanitary conveniences of approved type, and withal with pleasing architectural appearance. This program, completed with the erection of the present high-school building, provides a total seating capacity of 5,766. Inasmuch, however, as the 1917 report shows an enrollment of 6,104, with an average daily attendance of 4,555, it is clear that the housing accommodations for the children of Columbia are barely sufficient for the present and must be increased with the growth of the city and with better attendance.

This building program cost about $465,000, of which amount only $250,000 was raised through the issuance of bonds. Of the remaining $215,000, $40,000 was a bequest from a citizen who gave, also, four acres of valuable land for a school site; $76,000 was alloted by the city council from the general funds of the city; while the school commissioners were obliged to divert the remainder, nearly $100,000 in the aggregate, from its exceedingly meager maintenance fund, which was never intended to be used for building purposes.

In short, a city, now of 35,000 population or more, with an assessment roll of $15,500,000, with a school enrollment of 6,104 pupils, and with a school system now in its thirty-fifth year has outstanding in bonded indebtedness for school purposes only $250,000—now $273,000, as $23,000 was assumed when two county school districts were annexed. At first glance this low bonded indebtedness may seem commendable, but in point of fact, when it is recognized that this low record has been obtained at the expense of that proper equipment and that generous maintenance essential to strong internal school work, the situation is but another indication that the citizens of Columbia either have not been informed in a forceful way of school needs or else the old indifference to the importance of good teaching and the conditions essential to good teaching still exists.

3. THE INADEQUACY OF THE SCHOOL MAINTENANCE TAX.

The history of local tax levies for school purposes, likewise, affords a criterion for judging of the tangible interest which the citizens of the community take in their schools. When the school system of Columbia was organized, the local rate was fixed at 1 mill on an assessment valuation of $3,200,000. The rate was raised to 2 mills in 1884 on about the same assessment, and to 2½ mills in 1890 on an assessment of $3,500,000. During the period the State constitutional

tax had remained constant at 2 mills, which, prorated on the basis of enrollment, yielded Columbia less than $4,000 annually. In 1895, however, the constitutional convention increased the State tax rate to 3 mills, where it has since remained. This increase of 1 mill by the State was at once offset by the citizens of Columbia, who decreased their city rate, putting it back to 2 mills, despite the fact that the average daily attendance at the schools had risen from 864 to 1,825, whereas the assessment roll had barely reached $4,250,000. That is to say, during the first 12 years of the life of the public schools of Columbia, whereas the average daily attendance had increased 111 per cent, the amount received for maintenance from State and city taxes had risen from $8,540.81 in 1883–84 to $15,895.45 in 1896–97, an increase of 87½ per cent only. Here the local tax rate remained, that is, at 2 mills, for the next 20 years, or until 1916, when it was increased to 5 mills.

This increase in the city tax rate for school maintenance, granted in 1916, was forced on the people's attention for the reason that the adoption of a State-wide prohibition law automatically abolished the dispensary fund, which the Columbia schools had been sharing with other schools of the State and county in steadily increasing amounts since 1900. This fund was derived through a constitutional act, passed in 1895, whereby the net profits of the sale of intoxicants by dispensaries was to accrue to the schools and be distributed among them on a pro rata enrollment basis. Later the State plan was changed to a county system on a local option basis, and so continued until abolished in 1915. In 1912–13 Columbia's share of the county dispensary fund, based on enrollment, was $17,385.10, which was 35⅞ per cent of the entire fund. It was urged, however, that inasmuch as most of the intoxicants sold in the county were consumed by the citizens of Columbia, she was entitled to a larger proportion of the returns. This contention was considered reasonable, and thereafter, until the system was abolished, the Columbia schools received 50 per cent of the fund and the schools in the county lying outside the city limits were apportioned the remainder. To meet the deficit brought about through the termination of this arrangement, an increase in city taxes of 3 mills was allowed, thus raising the total city rate for school maintenance to 5 mills.

4. THE WAY COLUMBIA APPORTIONS HER INCOME.

Yet another means of determining how much real interest of the kind that counts the citizens of Columbia are taking in their schools lies along the line of determining how Columbia spends her money, and the proportion of it which she gives to her schools in comparison with what other cities of the country are doing. The basis for coming at Columbia's rank in respect to this matter is to be found in the

tables of statistics compiled by the Census Bureau for 1916 and issued under the caption: "Financial Statistics of Cities Having a Population of over 30,000." Table 13, of this publication, shows that Columbia expended during 1916 $11.31 per capita of population (the 1915 population estimate of 34,058, made by the Census Bureau, was used) on her municipal activities, and that the amount was distributed among these activities in the following way:

For police protection, $1.95; for fire protection, $1.58; for health and sanitation, $1.02; for the extension and improvement of streets, $1.99; for charity, $0.74; for libraries, $0.02; for parks and playgrounds, $0.56; and for schools, $2.29. The remaining $1.16 of the aggregate amount went for overhead expenses of city administration.

In themselves, these figures mean very little. Not until they are compared and contrasted with the expenditures of other cities for the same purposes do they begin to take on meaning. The table which follows shows how the distributed expenditures of 213 cities look when viewed as an average.

Distribution of city expenditures.

Purposes.	Columbia.	Average of 213 cities.
Police department	$1.95	$2.10
Fire department	1.58	1.65
Health and sanitation	1.02	1.90
Street department	1.99	1.91
Charities	.74	1.34
Libraries	.02	.24
Parks and playgrounds	.56	.67
SCHOOLS	2.29	5.77
All other purposes	1.16	3.11
Total per capita expenditure	11.31	18.69

While this comparison helps us to see where Columbia stands in relation to the actual average expenditure of the 213 cities considered, yet, as her total expenditure is considerably less than the total average expenditure of the list, another table is needed to make her rank in this matter perfectly clear, and that is a table showing the proportion each item bears to the entire expenditure. This table follows:

Ratio of school expenditure to total expenditures.

Purposes.	Columbia.	Average of 213 cities.
	Per cent.	*Per cent.*
Police department	17.2	11.2
Fire department	14.0	8.8
Health and sanitation	9.0	10.2
Street department	17.6	10.6
Charities	6.5	7.2
Libraries	.2	1.3
Parks and playgrounds	4.9	3.6
SCHOOLS	20.2	30.8
All other purposes	10.4	16.3

From this table it is apparent that, as compared with the average of 213 cities, Columbia's chief interest is in the police, fire, and street departments; that her interest in health and charity is somewhat less than the average of the cities listed; and that she is decidedly lukewarm in the financial attention which she devotes to her library and to her schools. Two-tenths only of Columbia's expenditure goes to the schools, whereas of the 213 cities of the country considered in these statistics the average expenditure for public schools is three-tenths of the aggregate. That is, Columbia's proportionate expenditure for the schools would have to be increased 50 per cent to bring her rank up to the average of the cities of the country.

In respect to this matter of the part of the aggregate annual expenditure which goes to the support of the local schools, Columbia stands No. 5 from the bottom of the list of 213 cities. Galveston, Tex., gave but 18 per cent of her money to her schools; Tampa, Fla., 18.9 per cent; San Francisco, 19.9 per cent; Savannah, Ga., 20 per cent; Shreveport, La., 20 per cent; Columbia, S. C., 20.2 per cent. Eliminating Galveston and San Francisco, in view of recent disasters, which have necessitated almost the complete rebuilding of both cities, we find that Tampa, Savannah, and Shreveport alone stand between Columbia and the bottom of the list; furthermore, only the small matter of 1.3 per cent prevents her from having that rank as it is.

5. THE AMOUNT COLUMBIA EXPENDS ON HER SCHOOLS IN COMPARISON WITH CITIES OF THE SAME CLASS.

The foregoing ranking is based on the proportionate expenditure for schools among the several municipal departments of the cities considered. It will be interesting to learn where Columbia stands in relation to other cities in respect to the total amount of money actually expended annually for schools, for of course bills must be paid in money and not in per cents.

Again referring to the Census Bureau's figures, we find that 118 of the 213 cities expended $5 and above, per capita of population, on school maintenance, 1 of these being in excess of $10; that 80 expended between $3 and $5; that 10 expended between $2.30 and $3; and that 5 only spent less than $2.30. These are: Jacksonville, Fla., $2.13; Portsmouth, Va., $2.21; Shreveport, La., $2.23; Mobile, Ala., $2.28; and Columbia, $2.29. So here, again, in terms of amounts actually apportioned to the schools from city income, Columbia ranks No. 5 from the bottom.

The apparent indifference to school needs stands out even more strikingly when considered in conjunction with her rank among the cities with respect to the aggregate municipal expenditure actually made for all purposes. As we have seen, Columbia expended an aggregate from city sources for all activities of $11.31, but there were

58 cities in the list which expended less than this sum. So, putting these two facts together, we draw this conclusion: In 1916, whereas Columbia stood No. 59 from the bottom in her total city expenditure, she stood No. 5 from the bottom in the proportion of that expenditure which she gave to her schools.

So far we have been considering merely what Columbia has done with her city taxes. It will now be of interest to determine Columbia's rank among the cities of the country in respect to the total annual amount derived from all sources, which was expended by her school department, exclusive of the cost of buildings and sites, per capita of pupils in average daily attendance. The statistical facts necessary to make this comparison are to be found in the report of the United States Commissioner of Education for 1917, the figures therein given being based on returns for the school year 1915–16. Combining the facts taken from several tables in the commissioner's report, we get the following results:

School maintenance expenditure per pupil in average daily attendance for the cities of the United States, in 1915–16.

Cities.	Total expenditures (not including buildings and sites).	Pupils in average daily attendance.	Average expenditure per pupil in average daily attendance.
Cities of the United States (all above 5,000 population)	$256,941,963	5,762,197	$44.60
Cities of South Atlantic States (all above 5,000 population)	12,313,538	418,062	29.45
Cities of South Carolina (all above 5,000 population)	500,383	30,685	16.31
Cities of South Carolina (all above 25,000 population)	207,867	9,237	22.50
Columbia	83,590	4,029	20.74

From this tabulation it is evident that even if Columbia doubled her annual maintenance expenditure per pupil she would still fall short of the average amount expended by 1,241 city systems of this country by over $3 per pupil. She would have to increase her expenditure by 42 per cent to reach the average expended by the cities of the South Atlantic States. She is ahead of the average of all of the cities of her own State, large and small, by $4.43, but when the small places are excluded, and she is compared with the cities of her own population group, i. e., cities having a population of between 25,000 and 100,000, which is the grouping used in the commissioner's report, she is again below the average per pupil, this time by $1.76.

Again, among the 179 cities in Group II (25,000 to 100,000 population) of the commissioner's report, there were but 2 expending a less annual aggregate for 1915–16 than Columbia. These are Warwick, R. I., whose expenditure was $4,292 less, and Lewiston, Me., with $453 less. However, in 1916 these cities had an average daily attendance for the year of but 1,857 and 2,426 pupils, respectively, whereas Columbia's attendance during the same period was

4,029. As regards other cities in her own population class, then, it is obvious that Columbia makes no showing at all. Indeed, her rank, with this same matter of annual expenditure for school maintenance in mind, among the cities of Group III (cities having between 10,000 and 25,000 population) is not flattering. In this group there are 372 cities, of which number 204 expended a larger total on their schools than did Columbia. The average amount which these 372 cities allotted was $99,047, which is $15,457 more than Columbia spent, and these comparisons, it must be remembered, are with cities ranging from 10,000 to 25,000 in population.

6. CITIZENS POINT TO A HIGH TAX RATE. IS IT HIGH?

Almost invariably, when effort is made to secure increased maintenance for the schools of Columbia, the general property tax rate is pointed to as a sufficient answer. It will be of interest to look at the facts.

Referring once more to the Census Bureau's figures, this time turning to Table 32, we find that the property owner of Columbia paid for all purposes during 1916 a tax of $36 on every $1,000 of assessed valuation. Running over the list of 213 cities again with Columbia's relative place in mind, we find that 177 cities paid less than $36, while 35 cities, only, paid more. If this alone were taken into account, those who point to the high tax rate as a sufficient justification for not increasing school allowance would have some solid ground on which to stand, but those who make such a reply ignore one essential factor in the matter, and that is the proportion which the assessed valuation bears to the actual value. This same census table shows that the basis used by Columbia in making up her assessment roll was 25 per cent of the actual value. That is, the valuation upon which the property owner actually pays his tax is approximately only 25 per cent of the actual value of the property. "The reported basis of assessment in practice," the compilers of the statistical table state, "is for most cities an estimate, furnished by city officials, of the percentage which the assessed valuation of property forms of its true value." If, then, the taxes were based on actual value instead of assessed valuation, the general property tax rate for Columbia would have been $8.94 per thousand instead of $36. Comparing this corrected rate with the rates paid by the other cities on the list, corrected in the same way, we find that every city of the entire list except three has a higher tax rate than Columbia. These exceptions are: Roanoke, Va., $7.76; Charlotte, N. C., $7.86; and Easton, Pa., $8.62. It is clear, then, that the true tax rate (State, county, and city) of Columbia is not high; it is low. Indeed, it is very low, for it comes within three cities of having the lowest tax rate of all the cities of the United States having a population of

30,000 or over. The person, then, who replies to the appeal for more money for the schools by saying that the tax rate is high utters but a half truth which is completely misleading in its effect. Indeed, the tax rate in itself is no criterion whatsoever, though popularly held to be such. It is the rate or basis of assessment in conjunction with the actual tax rate that must be considered in order that a city's rank in respect to taxation shall be properly determined.

The tendency among cities is, unquestionably, to make the assessment valuation tally more and more closely with the true value, thus avoiding the misconceptions which inevitably arise where no such correct basis is used. Of the 213 cities listed by the Census Bureau, 122 report an assessment basis ranging from 75 to 100 per cent of the true value; 48 have a basis ranging between 50 and 75 per cent; 30 report a basis between 30 and 50 per cent; while 13 only report using 25 per cent, or a percentage lower than 25. It is in this last group that Columbia falls. Invariably the cities having a high assessment basis have a relatively low general tax rate; whereas, in general, those having a low assessment percentage must have a correspondingly high general tax rate. It would appear that there are many reasons for concluding that this movement among cities looking toward a closer approximation to the true value when the assessment roll is made up is a commendable one.

7. CITIZENS CLAIM THAT THE CITY IS POOR—IS IT POOR?

One other statement is frequently heard, when the question of school maintenance is raised, namely: "Columbia is a city of poor people and any increase in outlay will work an undue hardship on her property owners." The statement that the South is poor and that southern cities are struggling along against an almost insuperable economic burden has been made so often that the people at home, as well as the country at large, have come to believe it. In consequence, when much needed reforms are denied on the ground that the poverty of the community will not permit the cost, the answer goes unchallenged. Once, again, an examination of the facts will prove illuminating.

The Census Bureau, referring again to the report "Financial Statistics of Cities" (1916), Table 32, gives the true value, estimated by city officials themselves, of the property in 213 cities of 30,000 population or more which is subject to a general property tax. This estimate is given in terms of per capita of population, so that a comparison on exactly the same basis among these cities is easily made. The facts are that Columbia, with a per capita true value of $1,836, as stated therein, exceeds the average of the 213 cities by $463; that she exceeds the average of her own group of cities (30,000 to 50,000

population) by $718 per capita; and that out of the 213 cities listed by the Census Bureau there are only 11 having a higher property value per capita of population. A table showing these facts follows:

Estimated true property value per capita of population.

Average of 213 cities	$1,375
Average of 86 cities (30,000 to 50,000 population)	1,118
COLUMBIA	1,836
Pasadena, Cal	1,882
San Diego, Cal	3,106
San Francisco, Cal	2,343
Stockton, Cal	2,195
Shreveport, La	2,053
Boston, Mass	2,075
Brookline, Mass	3,883
Newton, Mass	2,006
Springfield, Mass	1,842
Charlotte, N. C	1,999
Madison, Wis	1,903

It is not true, then, that Columbia is a poor city. She is a rich city. Indeed, judging by the estimated per capita value of taxable property, she is one of the 12 richest cities in the United States. Even though this estimate which is based upon statistics of the Census Bureau collected from city officials themselves should be too large, nevertheless it is clear that Columbia is financially able to do for her schools all that needs to be done.

8. PERHAPS COLUMBIA IS NOT FULLY INFORMED ABOUT THE NEEDS OF HER SCHOOLS.

A community thinks as individuals and feels as individuals, but when it acts it acts in its corporate capacity. Before it acts as a corporate body the individuals constituting it must have thought to such purpose and felt to such purpose that a forceful minority, at least, have come to agreement. Then, and then only, can the community in its corporate and legal capacity be expected to carry into execution the cherished proposal. Furthermore, a community, again in its corporate capacity, never acts until it is compelled to act, especially when it comes to increasing taxes, for its representatives have been told in ways unmistakably plain that increasing taxes is a grievous matter, almost, indeed, as much to be feared as committing the "unpardonable sin." The first and necessary step, then, in any plan contemplating increasing the maintenance income of the schools, or, indeed, of any other group or municipal activity, is to enlist the active interest of individuals, as many in number, and so representative in character, that their demand will irresistibly impel the community, as a corporate body, to take the desired action.

It is a mistake to expect the men who chance at the moment to be the legal representatives of the community to take the desired action upon their own initiative. It is a mistake also to think that an appeal to them alone will suffice. They, as individuals, may be quite in accord with the proposal, but unless they can be shown that the project has won the ear of the community and that the community desires the requested action, they, as the community's trustees and spokesmen, can not, neither should they, commit the community to the plan. A community, therefore, and its representatives also, may appear to be indifferent to a given matter, whereas, in point of fact, those vitally concerned in it have not adopted the methods and taken the steps which are necessary to arouse the community to such interest that action will follow automatically and of necessity.

Responsibility for the initiative in matters pertaining to the schools ought, of course, to rest with the board of education, the superintendent of schools, the principals, and the teachers. They know most about the kind of service which the schools are giving to the community; they are the ones who know most about the present and the future needs; in fact the community expects these officers and teachers to take the lead in informing it of the schools' work, of their needs, and to suggest concrete plans for meeting these needs.

It is not sufficient, therefore, if nothing more be done than for the board of education formally to request of the tax levying body an advance in rate. Those responsible must first present their case to the people who make up the community. When the people are convinced of the need and are willing individually to be taxed to meet it, there will be no objection made when the matter is put up to the officials who fix the rate. The community in its corporate capacity will have spoken and action will inevitably follow.

The established method of winning the active attention of a community is that of publicity, and no opportunity for informing the people about their schools—their aims, their work, their cost, their problems—should ever be let go by. Through the columns of the local press, through bulletins issued on special phases of school work, through talks before civic bodies on matters pertaining to education, through exhibits of pupils' work which will arouse the collective interest and pride of the parents, through the medium of the parent-teachers' associations, and in many other ways easily discoverable, there can be kept up a constant process of dissemination of news about the schools. Furthermore, it must not be overlooked that the parents of the children who are in school are the people who make up the community group and who determine what tax levying bodies shall do. It ought not to be a difficult matter to convince the parents of the educational needs of their own children, nor of the value of what the schools are doing, nor of the necessity for concerted action to

secure relief. Doubtless it was this fact which the mayor and aldermen of Columbia, who constituted the "board of visitors" of 1893, had in mind when they said, speaking of the school situation of that year:

> Money is needed for the support of our public schools, and this can only be obtained by general taxation. Every increase of taxation is looked upon with suspicion by the citizens, but this can be overcome by fostering a greater, wider, and deeper interest in the public schools, by bringing the citizens and the patrons into close contact with the schools.

In discussing the responsibility of boards of education in this matter of exercising leadership in securing funds for school maintenance, Chancellor[1] makes a comment that is worth repeating. He says:

> If boards of education would spend half their time in work to get funds, they would do better for education than they now do. They prefer the easier labor of trying to reduce expenditures after others have given them what money they choose. It is symptomatic of incompetence for a board to worry and to wrangle over petty sums rather than to go out and raise sufficient means to carry on public education creditably. The work of educating public sentiment to reasonable school appropriations should be carried on all through the year by boards of education.

Until such methods of publicity, then, have been systematically and continuously employed, extending over a considerable period of time, and until definite programs calling for action have been presented to the community and rejected by it, can it properly be concluded that Columbia is indifferent to education and is neglectful of her schools deliberately.

SUMMARY.

1. The public school system of Columbia was organized in 1883 only after a hard struggle to overcome those who protested against "taxing one man's property to educate another man's child."

2. For 15 years after the organization of the system no provision was made for the erection of school buildings. No adequate building program was undertaken until 1905. The bonded indebtedness for buildings for school purposes now reaches but $273,000.

3. Tax levies for school maintenance have been begrudgingly allowed.

4. Of the 213 cities of the United States having a population of 30,000 or more, Columbia stands third from the bottom in the proportion of the total annual expenditure of the city which goes to the support of the schools. Her proportionate school expenditure would have to be increased one-half to bring her up to the average of the cities of this country.

5. In 1916 Columbia expended $11.31 per capita of population for

[1] Chancellor, W. E. Our Schools, Their Administration and Supervision. Heath & Co., 1909, p. 340.

all purposes, $2.29 of this amount going to the schools. Among 213 cities this expenditure placed her No. 59 from the bottom in the total amount for all purposes, per capita of population; and No. 5 from the bottom in the proportion of this amount which went to the schools.

6. If Columbia *doubled* her school maintenance and then added to this $3 per pupil, she would just reach the average per pupil in average daily attendance expended by 1,233 cities of the United States having a population of 5,000 or more. She will have to increase her expenditure by 42 per cent to reach the average expended per pupil in average daily attendance by the cities of the South Atlantic States having a population of 5,000 or more.

7. The true general tax rate of Columbia for all purposes is very low; excepting three it has the lowest true rate of the cities of the United States which have a population of 30,000 or over.

8. Columbia is one of the 12 richest cities of the United States, having an estimated property value of $1,836 per capita of population.

9. The school commissioners should take the initiative in informing the public in forceful ways of the needs of the schools and of the service they are rendering in order that adequate maintenance may be secured.

III.—INSUFFICIENT MAINTENANCE MEANS MEAGER SALARIES FOR SCHOOL EMPLOYEES.

1. SALARIES AND THE RISE IN LIVING COST.

The schools of Columbia organized in 1883 with a pay roll comprising a superintendent at $1,500; 1 principal at $900; 2 principals at $675 each; 1 teacher at $450; 5 teachers at $360 each; and 10 teachers at $270 each. Except for the salary of one teacher, the maximum salary of teachers remained at $360 for 19 years, or until 1902, when it was raised to $405. Three years later, the maximum was increased to $450; in 1907, to $495; and in 1910, to $540. In 1911 a 10 per cent increase was granted, which raised the maximum to $594 for regular grade teachers; to $643.50 for first-grade teachers; and to $893 for high-school teachers. During this year, too, the commendable plan was adopted, which has since remained in effect, of paying the teachers in 12 equal installments. Since 1911 the salary schedule has again been revised. Through this revision the high-school teachers received an advance of about 7 per cent and the white teachers of elementary grade about 6 per cent.

THE SALARY SCHEDULE EXPRESSED AS A DAILY WAGE TABLE.

The salary schedule as it now stands follows. It is expressed as a daily wage table, as well as an annual aggregate, in order that it may be seen just how low the salaries really are in comparison with other forms of service which are paid for by the day on the basis of 313 working days in the year. While the teacher is actually on duty in the schoolroom but 200 days in the year, this is not by any means the measure of the time she is engaged in school work; furthermore, her duties are such that, with few exceptions, the annual salary which she receives from her school employment comprises the whole of her income, out of which she must live the entire 365 days of the year. It is, therefore, fair, for purpose of comparison, to show what her annual salary amounts to when distributed among the 313 working days of a year.

It may be objected, too, that the teacher's daily program of work is not so long as that of workers in other lines, and that therefore such a comparison as this is not fair. It is true that in most systems the teacher does not go on duty until 8.30 a. m., and that she can leave her school when the children are dismissed at 4 p. m. (in Columbia 2.30 p. m., owing to the employment of the single-session

plan); yet in practice, in many instances, her work keeps her from half an hour to an hour longer. Furthermore, at all times she is subject to call, by superintendent, supervisor, or principals to attend meetings and conference on school matters. Moreover, the fact should not be overlooked that with most workers, when quitting time comes at the close of the day, the work is dismissed from mind until the next day, whereas with the conscientious teacher, as with the housewife, her work truly is never done.

Wage schedule of school corps, Columbia, 1918.

Superintendents and teachers.	Per year.	Per working day.
Superintendent	$2,500.00	$8.00
Supervisor of elementary schools	1,200.00	3.83
Supervisor of music	900.00	2.87
ELEMENTARY SCHOOLS.		
Principals:		
3 at (each)	1,300.00	4.15
2 at	1,000.00	3.19
1 at	900.00	2.87
1 at	693.00	2.21
1 (colored) at	650.00	2.07
Teachers:		
White—		
Minimum	500.00	1.59
Maximum	643.50	2.05
Colored	300.00	.95
HIGH SCHOOLS.		
Principals:		
1 (white) at	1,600.00	5.11
1 (colored) at	900.00	2.87
Teachers:		
White men—		
Minimum	900.00	2.87
Maximum	1,080.00	3.45
White women—		
Minimum	693.00	2.21
Maximum	742.50	2.37
Colored	398.00	1.26
Special teachers:		
1 manual-training man	600.00	1.92
1 domestic-science woman	540.00	1.72

THE SALARY SCHEDULE IN COMPARISON WITH THE WAGE SCALES OF OTHER EMPLOYEES.

It will prove of interest to compare the forgoing schedule for the school corps with the schedule in force among the employees of Columbia's municipal organization; with that adopted by her trades' union; and with that applying to the motormen and conductors of her street railway system.

Wage schedule of city employees, Columbia, 1918.

Employees.	Per year.	Per working day.
Chief of fire department	$2,000	$6.39
Chief engineer of fire department	1,500	4.79
Assistant engineer of fire department	1,056	3.37
Firemen	990	3.16
Chief of police department	1,800	5.75
Captain of police department	1,320	4.21
Clerk of police department	1,320	4.21

Wage schedule of city employees, Columbia, 1918—Continued.

Emyloyees.	Per year.	Per working day.
Detective, police department	$1,188	$3.80
Patrolmen, police department	990	3.16
Engineer-superintendent of waterworks	2,007	6.41
Chief engineer of waterworks	1,960	6.23
Engineer, waterworks	1,323	4.22
Clerk, waterworks	1,680	5.36
Fireman, waterworks	1,421	4.54
Stenographer	897	2.86
Readers for meters, waterworks	1,000	3.19
Helpers, waterworks	547	1.75
Head of garbage department	924	2.95
Drivers, garbage department	714	2.28
Playground supervisor	1,200	3.83
Assistant superintendent, trees and parks	1,500	4.79
Foreman	936	3.00
Driver	624	2.00
Laborers	468	1.50
Foreman of streets	1,200	3.83
Assistants	702	2.24
Laborers	468	1.50
City clerk and treasurer	2,400	7.66
Assistant clerk and treasurer	1,500	4.79
Stenographer	900	2.87

Wage schedule of trades-union, Columbia, 1918.

	Approximate amount per day.		Approximate amount per day.
Plumbers	$6.00	Musicians	4.00
Granite lentters	4.50	Barbers	3.50
Printers	4.50	Railway learners	3.50
Machinists	4.00	Pressmen	3.50
Bricklayers	4.00	Painters	3.50
Carpenters	4.00	Sheet-metal workers	3.50
Electricians	4.00	Theatrical workers	3.00
Brickmakers	4.00	Railway clerks	3.00

Wage schedule of motormen and conductors, Columbia, 1918.

	Per working day.
Under 6 months	$2.00
Six to 12 months	2.25
Above 12 months	3.00

All time above 10 hours per day carries one and one-half times regular rate.

It will prove instructive to make some comparisons based on the foregoing schedules. The white teachers of the elementary schools, it will be observed, get from $1.59 to $2.05 per day; if the women teachers in the high school be included the maximum reaches $2.37 per day. From $1.59 to $2.37 per day, then, marks the range of all salaries paid to the white women teachers of the system. Turning to the other schedules we find that the drivers of the garbage wagons, the laborers on the streets, in the parks, and waterworks, the "assistants" in the street department, and motormen and conductors who have served less than a year are the only workers among all these people whose daily wage falls below the maximum given to the best-paid woman teacher in the department. The stenographers in the employ of the city are getting, according to the schedule, 50 cents

a day more than the best-paid high-school woman and 82 cents per day more than the best-paid teacher in the grades.

The men teachers of the high school are getting from $2.87 to $3.45 per day. This higher rate places them in the financial class comprising the stenographers of the municipal departments, the firemen, policemen, meter readers, motormen, and conductors who have been a year in the service, barbers, railway learners, pressmen, painters, sheet-metal workers, theatrical workers, and railway clerks. While in the group made up of bricklayers, brickmakers, carpenters, electricians, and musicians are to be found the principals of the largest elementary schools of the city, who are getting $4.15 each per day.

It is not to be understood that the survey committee feels that the salaries of these workers are too high, indeed it wonders that the city can secure the service of capable men to head its various departments at the salaries which are paid. The committee's purpose is merely that of showing how inadequate the salary schedule of the school corps is in comparison with the wages paid workers in other lines, many of them requiring no such preliminary outlay for their preparation as that demanded of the school staff.

TEACHERS' INCOMES COMPARED WITH FIXED EXPENSES.

Another way of grasping the inadequacy of teachers' salaries is that of comparing their income with the fixed living expenses, for no one, surely, would argue that a teacher who gives her entire time to school work should not receive as compensation a wage that will support her in reasonable comfort and with a margin for emergencies.

There are 90 white teachers in the schools of Columbia; 39 of these report that they pay for their room and board, inclusive of fuel and laundry, an amount ranging from $27 per month to $45. The average expenditure for these items is $34. In addition, some 30 of the teachers pay car fare in going to and from their schools, which means an additional outlay of at least $2 per month. The average fixed expense for the teaching corps, then, ranges from $34 to $36 per month. The average aggregate fixed expense for the teaching year of 9 months, therefore, falls between $306 and $324, or about $315.

Summarizing the foregoing and comparing with the fixed income, the following is the result:

Income and expenses of teachers.

	Elementary white women.		High-school white women.	
	Minimum.	Maximum.	Minimum.	Maximum.
Income for the year	$500.00	$643.50	$693.00	$742.50
Fixed expense for 9 months	315.00	315.00	315.00	315.00
Balance remaining	185.00	328.50	378.00	427.50

Out of this balance, ranging from a minimum of $185 to a maximum of $427.50 among high-school women, the teacher must live for the remaining three months of the year; must provide her clothing for the entire year; must pay for her books, magazines, papers, lectures, and her summer school, if she attends; must provide for charity, for recreation, for life insurance, for doctor's bills, and for those dependent upon her, and many teachers are helping to support others; and must make her provision for the coming of the inevitable "rainy day." The magnitude of the problem confronting the teacher of Columbia can be appreciated to some extent when a study is made of the outlay she must make for clothing alone.

THE COST OF BEING WELL DRESSED.

To get at this is not a simple matter, for such a study involves setting up a minimum clothing standard for a group of women the members of which vary greatly in taste, in knowledge of materials and of styles, in purchasing ability, in capacity to mend garments and to "make over" old garments, and in ability to prevent the general wear and tear to which clothing is subject. As compared, however, with the women workers in other lines of work the standard required of the teacher in order that she may present that "smart" appearance which children appreciate and which her own self-respect demands it must be recognized is comparatively high, quite as high, indeed, as that expected of saleswomen, clerks, and stenographers. A study of the cost of being well dressed was recently made by the United States Bureau of Labor Statistics, the results of which study will provide a basis, at least, for conclusions regarding the cost which teachers are put to in clothing themselves.

This study was made of the clothing expenditures of 53 women workers of Washington, D. C., for the year 1916, and was based on the prices which prevailed during the later part of 1916 and the early part of 1917. All of the women were living away from home; and most of them were boarding in working girls' homes, in private families, and in boarding houses, although a few rented rooms and did their own food purchasing and cooking. All were between the

ages of 19 and 35 years and were self-supporting; 17 were employed in Government work, 13 in business offices, and 5 in telephone offices. The table which follows shows the average amounts expended by these women for "outside clothing" and also for the separate items of dress which are commonly worn by women and of which, as a rule, it is necessary to purchase a supply each year.

Average yearly expenditure for items of clothing, by income groups.

Annual income.	Number of women.	Outside clothing (suits, coats, sweaters, dresses, waists, dress skirts).	Other articles of dress.							All clothing.
			Hats.	Shoes.	Gloves.	Stockings.	Corsets.	Underwear.	Miscellaneous.	
Under $300	4	$19.78	$5.19	$7.59	$0.77	$2.74	$2.25	$3.13	$2.99	$44.42
$300 and under $400	5	22.63	4.45	7.10	1.23	3.42	1.91	4.62	8.80	64.15
$400 and under $500	9	45.80	9.33	12.06	3.19	6.02	2.48	7.11	10.79	96.77
$500 and under $550	8	47.50	10.31	13.50	2.88	5.83	4.13	5.22	9.99	99.35
$550 and under $600	5	72.48	13.80	16.60	4.46	6.20	2.30	7.05	19.21	142.19
$600 and under $700	7	57.55	12.71	14.20	2.62	3.88	2.98	6.37	7.42	107.77
$700 and under $800	7	66.78	13.47	16.71	5.32	6.89	3.79	11.39	16.82	141.17
$800 and under $1,100	8	99.34	19.06	21.25	6.00	7.25	6.06	9.94	32.23	201.13
All groups	53	57.58	11.59	14.20	3.32	5.53	3.41	7.18	14.27	117.49

An examination of the distribution shown in this tabulation must convince anyone who is at all familiar with the requirements and cost of women's apparel that, except possibly for the group which expended the maximum average, these women dressed on amounts which would by no means meet the standard which public opinion demands of teachers. For, as a class, teachers are expected to identify themselves with the activities (social, civic, and religious) of the community to a much greater degree than the class of workers upon whom the foregoing study was based. It can not be doubted that the maximum average expenditure, $201.13, is none too much for the teaching class; indeed, considering the advance in prices during the year 1917 (the study was based on 1916 conditions), it would seem that a yearly allowance for clothing ranging from $150 to $200 could not properly be considered extravagant. Recalling the fact that Columbia teachers, after paying for board, room, laundry, and carfare, have left an amount falling between the limits of $185 and $427.50, out of which they must not only provide their yearly allowance of clothing but their living expenses for the remaining three months as well, the fact must stand out very clearly that the teacher of Columbia is facing an impossible situation, and it is obvious, too, that with a salary margin so narrow the Columbia schools can offer no career which can possibly prove attractive to an ambitious and capable woman. A precarious existence can be eked out, it is true, if

the teacher is blessed with a generous measure of good health, but with such a limited balance as the figures disclose it is certain that there can be no adequate and systematically pursued plan of self-improvement which prefessional standards properly demand in increasing degree and which is contingent on a sufficient margin of income and of time.

THE IMPERMANENCY OF THE TEACHING SERVICE.

Confronted with such a problem, it is to be expected that there will have been many teachers who will have entered the public-school service intending to remain but a short time, two or three years at most, and determined to drop out at the first opportunity. An examination of Columbia's records with length of service in mind discloses the fact that since the schools were organized in 1883 there have been 335 teachers employed; 248 of whom dropped out during the first five years of their service, 210 during the first four years, 172 during the first three years, and 124 continued no longer than two years, of which number, 63 left after having been in the department but one year. Putting this situation another way, it is correct to say that there were as many teachers who remained three years and less as there were those who remained longer than three years. That is, in the language of the statisticians, three years is the median or middle point of service. A table showing these facts in detail follows:

Period of teaching service, Columbia, 1918.

	Years.														
	1	2	3	4	5	6	7	8		10	11	12	13	14	16
White teachers	52	38	34	32	26	9	7	6	4	4	2	3	4	3	2
Negro teachers	11	23	14	6	12	6	1	1	1	3	4	5	1	1	2
Total	63	61	48	38	38	15	8	7	5	7	6	8	5	4	4

	Years.										
	18	20	21	22	23	26	27	28	29	35	Total.
White teachers	4	1	1	3	1	1	1	0	1	1	240
Negro teachers	3	0	0	0	0	0	0	1	0	0	95
Total	7	1	1	3	1	1	1	1	1	1	335

Such impermanency in the teaching corps as these facts disclose must seriously handicap the superintendent and his supervisors in working out a unified, consistent, and well coordinated educational policy. Furthermore, it is clear that teachers who enter the department to leave it at the first opportunity are not going to give to their work that unremitting application necessary to secure the best

results. Even under the most favorable conditions there will always be many transients among teachers, but good instructional opportunity for the children requires that serious effort be made to stabilize the teaching force. Offering good salaries is one way which will help in accomplishing this object.

This instability in the teaching corps is in striking contrast to the situation which prevailed among the elementary schools of Prussia prior to the outbreak of the war. In these schools, which are remarkable for producing the kind of efficiency which Germany demands, recent studies show that 45 per cent of the male teachers of the cities had been in service for more than 20 years and only 6.69 per cent had had less than 6 years' service, while 77.67 per cent had served more than 10 years.[1] Conditions of salary, of tenure, of retirement provisions are such that teaching in Germany has become a profession wherein those who enter do so intending to remain in the work for life. The German elementary-school teacher does not receive a large salary, but it is sufficient to provide him with a comfortable home, an education for his children, a margin of savings, and a pension upon retirement which will keep him from want for the rest of his days. If teaching is ever to become a profession in America, it will be only after some such provisions are made to secure greater permanency in our teaching force.

CONDITIONS ESSENTIAL TO SUCCESSFUL TEACHING.

Good business practice outside of the teaching profession is recognizing this need, for it is learning that success within the field of business enterprise is largely dependent upon offering to employees inducements such that long tenure and the taking of a vital interest in the business will inevitably ensue. If it be true that a happy, contented, and care-free employee is requisite for success within the domain of business, how much more must a serene mind be essential to work of a superior quality in the business of teaching. Good teaching, perhaps more than good work in any other activity, is dependent upon a buoyant, hopeful, joyous mind; for good teaching is a matter primarily of the spirit. A state of mind is contagious. Happy teachers mean happy children, and unhappiness in a teacher inevitably begets unhappiness among children. Men and women, as well as children, can never do their best work when they are dispirited, discouraged, and depressed. True, some teachers are able, however adverse the conditions, to live in the realm of the free spirit, but with most the response to material conditions is powerful and immediate. In the interest of the children, therefore, school officials should give much practical consideration to the ways and means of improving the material conditions which press in upon the life of their teachers.

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[1] Sander: The Prussian Elementary Schools, Macmillan, 1918, p. 197.

The qualifications required of teachers are constantly rising. There was a time when young people who could do nothing else or who wished to gain a few dollars to enable them to attend a business college or a medical or law school turned to teaching with no intention of remaining in the work longer than a year or two at most; but those days have gone by never to return. It is now generally recognized that qualities of character and intelligence, as well as careful training, are essential; and, more and more, officials who are responsible to the people for the administration of their schools are raising the required standard of qualifications. The teacher should be and in most cases is the equal of the men and women who enter other branches of professional life; and yet she, all too frequently, receives a recompense which is less than the wages of those who are doing the most menial and unskilled labor of the community.

Again, as standards of teacher qualifications are raised an increasingly larger technical preparation is demanded. The best teachers in the grades are well grounded in the chief departments of human knowledge; they know what the big things are which are being accomplished in the broad fields of the world's work; they have developed well-defined standards of taste and appreciation in music, art, and literature, and know the best contributions which these arts have produced; they keep abreast of political thought and discussion in their own community, and in the larger community which lies beyond; and, moreover, within the field of education, they are students of the general and special method of education and keep in touch with the progress of pedagogical investigation and discussion, working over continually into schoolroom practice the established results of such experiment and observation. Years of preparation are required, in the high school, in the college or university, and in the professional course, followed up by vacations spent in summer schools, by Saturdays and holidays spent at lectures and teachers' meetings, by evenings occupied in intensive and detailed preparation for the classroom work of the following day. Besides time, effort, and strength of body and of purpose, the expenditure of considerable money is necessary in securing such preparation. It is no act of justice to those who have gone through with such a laborious and expensive course of training as is now required that they should, in the end, find themselves limited to a salary so small as to seem pitiful.

Furthermore, a teacher should purchase many books, she should attend conventions and conferences, and she should travel. Her growth can not be maintained unless she reads daily; unless she comes in personal contact with people outside her own community and who afford a corrective against the provincialism of localities; and unless she broadens her horizon through travel. But these

things can not be accomplished without money. A teacher should be so situated financially that she can spend a fifth of her salary, at least, in such effort at self-improvement and in the acquisition of self-culture.

In short, a salary should be paid sufficient to enable teachers to live in reasonable comfort and still have left a margin adequate to permit them to take advantage of the various opportunities for personal growth offered by their own and other communities; and with a margin, too, generous enough to make it possible for them to command that respect and recognition in the community to which the dignity and worth of their profession entitles them. In addition, a teacher who has proved her worth in actual practice should be placed completely at ease with respect to tenure. Provisions should also be made, again with the welfare of the children in mind, for a retirement fund which will enable an allowance to be made to the one who has faithfully served her community during the active and virile period of her life span and which will make it easy for her to be withdrawn from the classroom when her usefulness has ended.

COLUMBIA'S EXPENDITURES FOR TEACHERS' SALARIES.

Columbia, then, it must be pointed out, has still far to go in improving the material conditions of her teachers in respect to salaries and to retirement allowances before she can command the uninterrupted services of teachers of the highest training and ability; before she can expect to hold them up to the highest standards of teaching skill; and before she can properly insist upon evidence of a greater progress in self-culture than is now to be observed in the rank and file of the school corps. Indeed, in both salary schedule and in provision for a retirement allowance others cities and other sections of this country have far outstripped Columbia, as the facts seen in comparison will disclose.

To illustrate: During the academic year 1915–16 Columbia expended a total of $70,419 in salaries of principals, supervisors, and teachers (superintendent's salary not included). As there were 4,029 pupils in average daily attendance for the year, this expenditure amounted to $17.48 per child. During the same period the average per pupil, reckoned on precisely the same basis, for the 165 cities listed by the Commissioner of Education as being in Columbia's population group, was $30.82. Of the 165 cities, 117 expended from $25 to $65 per pupil in average daily attendance; 40 expended from $18 to $25; while 8 only fall into the last group—that is, the group expending less than $18 per child. These eight cities follow: Columbia, $17.48; Savannah, Ga., $16.96; Portsmouth, Va., $16.84; Montgomery, Ala., $16.69; Shreveport, La., $16.31; Joplin, Mo., $15.80; Macon, Ga., $15.51; and Charlotte, N. C., $15.39.

Summarizing, we find that 138 out of the 165 cities of Columbia's class expended on teachers' salaries one and one-half times as much as she did; while 36 out of the 138 expended twice as much or more.

Whatever may have been true in the past in regard to the purchasing power of a dollar, it is an established fact that now, as among different sections of the country, the dollar is stabilized; and its value, with slight local variations, is the same the country over. Only one explanation then can be offered to account for the great difference between the salaries paid the teachers of Columbia and those paid generally throughout the country, and that is that the citizens of Columbia do not yet realize how necessary it is in securing results of the first order in the schoolroom to have teachers at ease in respect to the financial side of living.

When the amount which the teacher must invest in her training is taken into account, and when the greatly lessened purchasing power of a dollar is considered, it is not too much to expect of Columbia or of any other American city to pay to elementary grade teachers a beginning salary of $600, which shall increase regularly to at least $1,280, and a beginning salary in the high school of not less than $800, increasing to $1,500 or more. The salary of principals, superintendent, janitors, and other members of the school corps should be increased in proportion. Surely there can be no justice in the pittance which Columbia pays her colored teachers, for the most ignorant members of their race can earn in the cotton fields considerably more per day than the colored teachers of Columbia are receiving. Indeed, inquiry discloses the fact that it is impossible for these teachers to live on the salary which they are now receiving from the school department, and that, in order to become self-supporting, it is necessary for those without other income to do sewing or whatever work comes to hand.

THE RISE IN THE COST OF LIVING.

This serious inadequacy is particularly striking when the facts regarding the rise in the cost of living are taken into account. Studies made by the United States Bureau of Labor Statistics show that food prices throughout the United States have risen each year since 1907, except during 1911 and 1915; that food as a whole was 52 per cent higher in December, 1917, than in December, 1913; and that, as compared with 1907, prices had increased 78 per cent.

In practically all of the industries wages have increased in response to this rise in the cost of living; thus, organized labor is now found to be receiving more than in any preceding year. In all trades taken collectively, the United States Bureau of Labor Statistics points out,[1] the increase in hourly wage rates in 1916 over

[1] U. S. Bureau of Labor Statistics: Bulletin No. 214.

1915 was 4 per cent; over 1914, 5 per cent; over 1910, 14 per cent; and over 1907, 19 per cent. Although the wage rate has steadily increased it has not kept pace with the increase in food prices, consequently the purchasing power of an hour of labor has correspondingly declined. These facts are brought out in the following table, made up from tables published by the United States Bureau of Labor Statistics:[1]

Food purchasing power of wages diminishing.

Years.	Wage rate per hour.	Food prices.	Food purchasing power of wages.
1907	100	100	100
1908	101	103	99
1909	102	108	95
1910	105	113	93
1911	107	112	95
1912	109	119	91
1913	111	122	91
1914	114	125	91
1915	115	124	92
1916	119	139	86
1917	.....	178	.....

This table shows both wage increase and food-cost increase, in comparison with what wages and food prices were in 1907. By comparing the increase in wage rate from year to year with the more rapid advance in food prices, the facts about the steadily diminishing value of wages are seen. Thus it appears that from 1907 to 1912 the value fell off about 9 per cent; that the advance of wages during 1912, 1913, and 1914 kept even pace with the advance in prices; but that since 1914 there has again been a rapid decline, resulting in a net loss for the entire period of 14 per cent. If wages increased no more rapidly in 1917 than during 1916 (the facts are not yet obtainable), then the net loss for the period will have grown to 69 per cent, giving a total loss of 31 per cent since 1907. It is clear from this statement that the country will be compelled to make radical readjustments of wage schedules if workers are to remain self-supporting; it must be clear also that in no branch of endeavor is there greater need for immediate revision of schedules of compensation than among the teachers. Already many parts of the country are reporting inability to secure teachers at all, and unless boards of education respond promptly to the economic demands of the time we shall see a teacher "famine"; for, with conditions which now obtain, teachers who receive no more than do the teachers of Columbia can not possibly remain self-supporting.

COLUMBIA'S SALARY SCHEDULE RECOGNIZES EXPERIENCE, BUT NOT MERIT.

The salary schedule for Columbia teachers now in force recognizes only the factor of length of service in determining compensation.

[1] U. S. Bureau of Labor Statistics: Bulletin No. 214.

That is, a teacher in the grades begins at the minimum of $500 per year; her yearly salary automatically increases until the fourth year, when the maximum of $643.50 per year is reached, which then becomes the amount she receives annually for the remainder of her employment. This method of fixing salaries is the one, though with many differences in detail, which is in operation in most of the cities of this country. However, it is generally recognized that such an arrangement has serious defects.

In the first place, everyone knows that some teachers are worth very much more to a department than are others, and that this worth is not dependent on length of service. In the second place, such a plan offers no inducement for special industry or effort for self-improvement, for the teacher who does just enough to escape dismissal gets quite as much as the teacher whose heart is in her work. And, again, there is a strong tendency among teachers, as among all workers on salary, when middle age is reached and the maximum salary is attained, to permit the desire for a comfortable, easy-going life berth to outweigh the ambition for a steadily increasing personal efficiency which entails hard work and many denials of personal pleasure. A salary schedule having a maximum which is reached early in the service and beyond which no individual can advance operates powerfully to inhibit growth.

However, with an adequate salary, with high standards of professional qualifications for entering teachers, and with good supervision, the experience of many systems shows that even under such a salary plan a large part of the teaching corps in a given department can be developed into good teachers and maintained as such for a number of years. But whether or not any considerable percentage of such a group come to be properly called excellent teachers will depend in large measure upon the special inducements which the system offers through the medium of its administrative methods and its salary schedule. It ought, therefore, to be possible to devise a plan which will permit of an increase in salary, beyond a maximum representing a living wage common to all, for those teachers who show evidence of increasing scholarship and of professional preparation and whose demonstrated efficiency and general worth are high.

PLANS FOR RECOGNIZING MERIT.

The success of any plan based on the personal efficiency of the teacher must of necessity turn upon the method employed for determining the degree of that efficiency. Just here lies the difficulty, for the responsibility of passing judgment upon the teachers of a department must rest upon the superintendent and his staff of supervisors. The teacher who is graded low compares herself with some other teacher in the department more fortunate and then concludes that

she has been unfairly and unjustly marked. In some places the dissension in the corps, in consequence of alleged unfairness in evaluating the efficiency of the teachers, has been so great as to outweigh the benefits. Indeed, it is doubtless the fear of engendering such discord that has deterred many school authorities in adopting a plan to recognize individual merit in terms of the salary schedule.

To avoid, as far as possible, this danger of unfairness and to provide a check against error of judgment, most plans of this type use a form for scoring efficiency besides requiring that each teacher shall be graded by more than one person. In Decatur, Ill., for example, the grade of each teacher is a composite made up by the superintendent from the markings of three persons who consider the following factors:

1. Physical aspect of school.
2. Teacher's personality.
3. Adaptability.
4. Loyalty to school policies.
5. Spirit of cooperation.
6. Attitude toward pupil.
7. Discipline and control.
8. Professional interests.
9. Teaching skill.
10. General impression.

The Savannah, Ga., plan is as follows:

1. A probationary period of one year, with indefinite tenure thereafter.

2. A beginning salary of $495, increasing automatically $45 per year for five years.

3. At the end of the five-year period the teacher may remain indefinitely at the attained salary level or she may apply for promotion to the next salary group. (This application may be made at the end of the fourth year of service, if desired.)

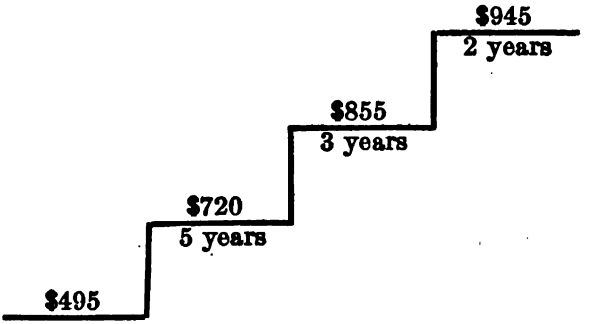
4. The applicant for promotion is rated by three persons three times during the year following the announcement of her candidacy. This rating is based on the following efficiency factors: (*a*) Scholarship; (*b*) methods of teaching; (*c*) management of pupils; (*d*) attention to the details of school business; (*e*) personality; (*f*) professional interest and growth; (*g*) spirit of loyalty and cooperation; (*h*) interest in and sympathy with children.

In addition, she is expected to pursue during the year some academic study relating somewhat generally to the subject matter of her teaching; also to read two modern educational books from an approved list and defend before a group of examiners a paper which she prepares on some theme suggested by her reading.

5. If successful, she passes into the second salary division, which begins with $720 and increases automatically $45 each year for a period of three years. This brings her to $855, where she can again rest, or, in turn, become a candidate, as before, for entrance to the third salary group, which likewise increases automatically $45 per year, this time for two years.

6. This last step, which can be reached in a minimum of 11 years from the beginning, marks the final maximum which is possible for her to receive under the provisions of the plan. Here she remains—that is, at $945—for the remainder of her teaching period.

The steps in this plan are shown in the following diagram:



As a department should be able to attract able teachers from the outside who would be unwilling to enter at the beginner's rate, provision is made for extending certain credit to such. A normal graduate of an accepted school, for instance, can be started with three years' credit, and a graduate of a class "A" college may be given four years' credit in terms of the salary schedule.

The teachers of colored schools are eligible to the same promotions; but, in recognition of an assumed difference in cost of living and in the expense of training, as compared with the white teachers, their salary has been set at all points at 75 per cent of that of the white teachers. It is pertinent to ask, in this connection, however, whether the living cost of negro teachers is actually less, or, if less, should it be less than that of white teachers? The same question should likewise be raised respecting the cost of the training required of negro teachers. Again, if the facts should show that there is no appreciable difference in either the cost of living or the cost of training as between white and negro teachers, should not both groups work under the same salary schedule?

A PLAN SUGGESTED FOR COLUMBIA.

The following plan, based upon that suggested by Cubberley,[1] is recommended as a possibility for Columbia:

Tentative salary schedule for the elementary teachers of Columbia.

Teachers.	Term of appointment.	Beginning salary.	Yearly salary increase.	Years to reach the group maximum.	Maximum salary for the group.
One-year teachers (probationary)	1 year	$600	$50	3	$750
Three-year teachers	3 years	750	50	3	900
Five-year teachers	5 years	900	40	5	1,100
Permanent teachers	Until retired	1,100	30	6	1,280

[1] Cubberley: Public School Administration, p. 261.

When the maximum of each group is reached, the following alternative courses should be open to the board of education:

1. Termination of the contract (permissible each year in group No. 1).
2. Reappointment annually at the group maximum.
3. Promotion to the next higher group.

The promotion from group to group beyond that of the three-year teachers should be granted only to those who have shown special merit and have given evidence of valuable professional study. To satisfy the latter condition the board might require the candidate for promotion to spend a year in study at some recognized college or university, or a year in teaching in some good school system in another part of the country, or perhaps a year in study and travel combined. In this connection a system of exchanging teachers might easily be established between Columbia and other cities to their mutual advantage.

A schedule similar to this could easily be arranged for the teachers of the high school, and for the teachers of the colored schools as well.

SUMMARY.

1. Columbia women teachers are in the same wage class with the drivers of the city garbage wagons, street laborers, and motormen and conductors who have served less than a year. City stenographers get 50 cents a day more than the best-paid high-school women and 82 cents per day more than the best-paid grade teachers.
2. The teachers of Columbia, after paying for board, room, laundry, and car fare for the nine months of the school term have from $185 to $427.50 only, out of which they must provide their yearly allowance of clothing and their expenses for the three summer months.
3. The conditions are such that teachers remain but three years in public-school service.
4. The standards of teacher qualifications are constantly rising, requiring a larger technical preparation and a more expensive training.
5. Of the 165 cities in the United States in Columbia's population class, Columbia stands No. 8 from the bottom in the amount expended for teacher's salaries per capita of pupils in average daily attendance.
6. The salary schedule should recognize merit as well as length of service.

2. NO PROVISION FOR A TEACHERS' RETIREMENT FUND.

The problem of securing proper provision for the teachers' comfort will never be adequately met until a retirement fund, preferably State wide in its scope, is obtained. While members of many

professions may well continue their work until they have reached a "ripe old age," the average teacher in the grades or in the high school should give way much earlier. It is pathetic to see old people retained in the classroom long after they have earned the right to retire, because they have no resources and no other means of securing a livelihood and because of gratitude for what they may have done through the unselfish pouring out of their lives in the years gone by. Young children demand of teachers flexibility, adaptability, freshness, vivacity, vigor, good humor, and ability to give and take.

Only the person whose interests have been many-sided; whose sympathies have been sincere; and whose roots have run down into deep soil retain the qualities of adaptability and versatility beyond the years of middle life. Indeed, the shallow person whose life is lived wholly on the surface of things very early begins, like the grain of wheat which fell on stony ground, to wither away in spirit as in body. With such a one, surely, by the time middle age is reached it ought to be made easy for her to withdraw from actual contact with children in the classroom. It is not easy at this time of life for her to turn to a new occupation; indeed, in most fields of activity the doors of opportunity are closed to one of such age who is without experience, except that gained in teaching. The future which such a one faces is not bright. Out of the meager salaries paid, and with the demands steadily becoming more insistent, it is impossible for the teacher to set aside enough, year by year, to keep her in comfort for long after her earning period has passed. The result is that teachers are retained in the schoolroom by sympathetic school officials long after they should have withdrawn, and then, finally, when their work becomes so inefficient that it can no longer be overlooked, they drop out all too frequently, in the end dependents. This is not just to the faithful teacher who has given the best years of her life to the training of the children of the community; nor is it just to the children themselves, who are entitled at all times to the best instruction and training by the best and most vigorous teachers it is possible to obtain. There is no parent in Columbia who should rest content until the proper authorities have not only put the salaries of the school corps on a reasonable basis, but have made it possible through the establishment of a retirement fund for every man and woman who has dedicated his life to the service of the children of Columbia to spend the years of declining age in peace and comfort and with honor.

THE PROGRESS OF THE MOVEMENT.

The movement to secure retirement legislation is a recent one in the United States, but it has grown rapidly in the last five or six years. In 1916 plans for pension or retirement allowances for teachers were in effect in 33 States. Of these, 21 were State wide in

their application, 5 applied to two or more cities in the State, and 7 affected a single city or county. In general, these systems fall into two groups: The "straight pension" type, in which the State, or the administrative unit, supplies the whole of the fund; and the "contributory" type, in which the fund is derived, in whole or in part, from dues or assessments paid at regular intervals by the beneficiaries themselves.

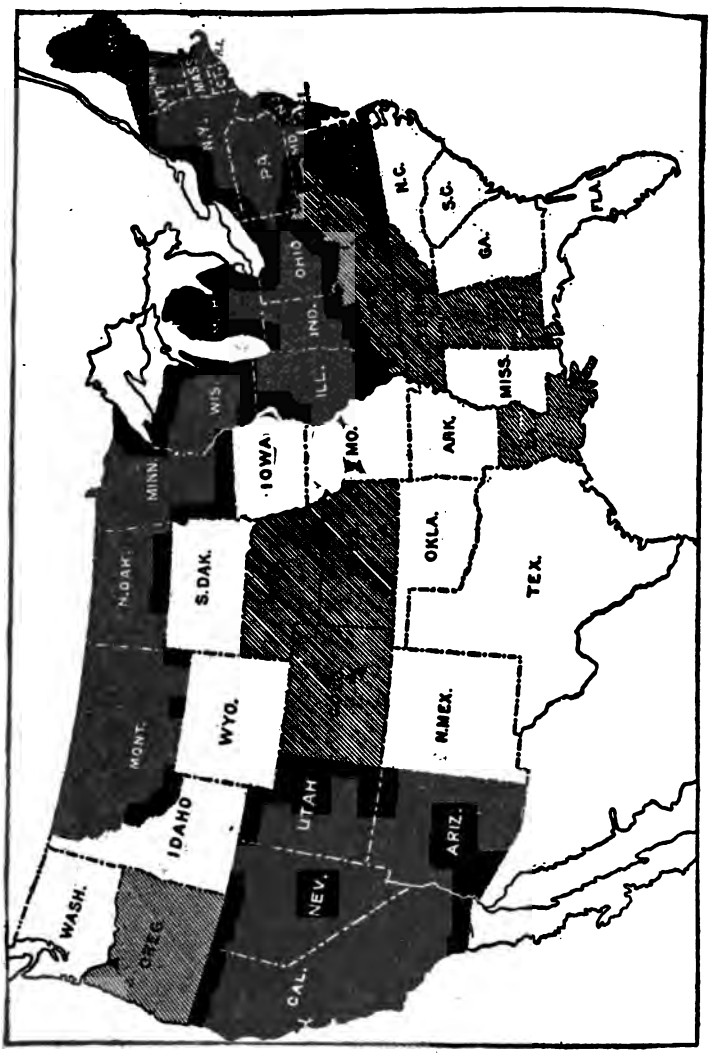
In practice the tendency, more and more, as the problem is given expert study and practical test, is in the direction of developing a system which shall be of the partially "contributory" type; which shall be State wide in application; which shall be jointly controlled by the public and the participants; and which shall be operated on the actuarial reserve basis, the rates of payment into the fund to be scientifically determined, so that the amount paid in during the period of service will be sufficient, with the interest which it will earn, to cover the benefits to be paid. The most recent, as well as perhaps the most comprehensive study which this complicated and difficult subject has received, has just come from the press: Principles Governing the Retirement of Public Employees, by Lewis Meriam, issued by the Institute for Government Research, Washington, D. C. (1918).

MERIAM'S STUDY OF THIS PROBLEM.

The writer holds that the ideal system of the future will provide benefits for superannuation; for permanent disability due to accident or to disease; for withdrawal from service, whether by resignation or dismissal; for death in active service; and for death after retirement, if the employee on retirement desires to accept such provision as an optional method of settlement. He suggests that compulsory superannuation retirement at a specified age rather than upon length of service should be required, though a provision for the retention of an employee on account of unusual merit not to exceed five years may be desirable, as would be a provision permitting retirement at not to exceed five years below the compulsory age. As to benefits, he regarded it as essential that the precise basis for determining the amount which shall be paid should be prescribed by law and not be left to the discretion of administrative officers.

Instead of making the superannuation benefit or annuity directly proportional to salary he would have it consist of: (1) A certain fixed sum payable to all alike; and (2) an amount which would be practically equivalent to a definite proportion of the average salary received during the last five years or so of service, the two taken together making up the total allowance which, in general, should not be less than the minimum of subsistence. Disability benefits, on the other hand, can not be based, he believes, solely on the purchas-

ing power of accumulations to an individual's account, a procedure which he recommends in the case of a superannuation benefit, but should be provided for on a collective insurance basis accomplished by either one of two methods—(1) through having each employee insured against disability for a certain specified sum and varying



EXTENT OF THE TEACHERS' PENSION MOVEMENT.

States having State-wide pension systems for public-school teachers.
States having teachers' pension laws that apply to certain cities or counties (localities indicated by △).
States without teachers' pension laws.

the premium according to the cost of the insurance at the employee's age of entrance; or (2) having each employee pay for a certain amount of disability insurance and letting the purchasing power of this premium determine the amount of the insurance which shall be paid over in the event of disability.

Regarding the third class of benefits, that for withdrawals, the writer holds that benefits should be considered as part of compensation for service rendered, and that the participating employee holds, therefore, an equity not only in the contributions which he himself makes to the retirement fund but also in whatever the State may contribute in his behalf. In consequence, upon withdrawal from whatever cause, the beneficiary should be entitled to the whole amount except that part already expended in giving him the protection he has already had.

In the event of death in active service, this report suggests, the minimum benefit should be the accumulations to the individual's account, with compound interest, whether these accumulations have resulted from the employee's own contributions or from contributions made by the State in his behalf. As to death after retirement, the suggestion is that such a contingency should be met by offering the following optional modes of settlement, the choice of which is to be made at the time of retirement:

1. An annuity for life, with no payments in the event of death, a plan suitable for one without dependents or whose dependents have been adequately provided for.

2. For the one with a wife or husband only to consider, a last survivor annuity, payable as long as either shall live.

3. For a person with dependent children, an annuity payable to the individual until death and then to the family until the youngest child shall have reached 18 or some other predetermined age.

In each case, the amount of the annuity would depend on the amount standing to the employee's credit on retirement; this sum to buy as much annuity as it would purchase under any one of the three classes.

Perhaps the two plans which most nearly embody the chief features of Meriam's study are the Pennsylvania plan, now in operation, and the one proposed for the District of Columbia. The essential features of each follow:

THE PENNSYLVANIA PLAN.

According to this plan the teachers are eligible to receive the following benefits:

1. *A superannuation benefit.*—This comprises an annual retirement allowance beginning at the age of 62 and continuing throughout life of one-eightieth of the average salary of the last 10 years of service, multiplied by the total number of years the teacher has taught.

2. *A disability benefit.*—This is an annual retirement allowance beginning upon disability, and continuing throughout the period of disability, applicable to any teacher who is disabled after 10 years of service. The amount of the allowance is one-ninetieth of the average salary of the last 10 years, multiplied by the total number of years the teacher has taught. The minimum al-

lowance in every case is 80 per cent of the average salary of the last 10 years, except that no disability allowance is to exceed eight-ninths of the allowance which would have been received had the teacher remained to obtain the superannuation benefit.

3. *A death, resignation, or dismissal benefit.*—Upon the death, resignation, or dismissal of any teacher the total contribution of the individual, together with 4 per cent compound interest, is returned to the individual or to his estate.

The new entrant to the school system will pay for these privileges such percentage of his or her salary during active teaching service as is computed to be sufficient to provide one-half of the superannuation benefit. The present teacher will pay such percentage of his or her salary during active service as is computed to be sufficient to provide one-half of that part of the superannuation benefit which is allowable because of future service.

The following tables give the percentage of salary required as a contribution from teachers at the time they began to participate. This percentage is computed to remain constant throughout the remainder of the period of service.

Rates of contribution by teachers.

[These rates are computed on an actuarial basis and are lower for men than for women because the mortality among men annuitants is higher than among women annuitants, resulting in a smaller number of payments to men and consequently in a reduction in the cost of the allowance.]

Age.	Percentage of salary required of—		Age.	Percentage of salary required of—		Age.	Percentage of salary required of—	
	Men.	Women.		Men.	Women.		Men.	Women.
18	3.33	3.69	33	3.49	4.07	48	4.20	5.10
19	3.33	3.71	34	3.51	4.11	49	4.27	5.20
20	3.33	3.74	35	3.55	4.16	50	4.34	5.29
21	3.33	3.75	36	3.58	4.21	51	4.41	5.40
22	3.34	3.78	37	3.62	4.27	52	4.49	5.50
23	3.34	3.79	38	3.65	4.32	53	4.57	5.61
24	3.34	3 81	39	3.70	4.38	54	4.64	5.72
25	3.35	3.83	40	3.74	4.45	55	4.73	5.83
26	3.36	3.85	41	3.79	4.52	56	4.81	5.94
27	3.37	3.88	42	3.84	4.59	57	4.90	6.07
28	3.38	3.90	43	3 89	4.67	58	4.98	6.18
29	3.40	3.93	44	3.95	4.75	59	5.08	6.31
30	3.42	3.96	45	4.01	4.83	60	5.16	6.42
31	3.44	4.00	46	4.07	4.92	61	5.30	6.59
32	3.46	4.03	47	4.14	5.01			

THE PLAN FOR THE DISTRICT OF COLUMBIA.

The essential provisions of this plan are as follows:

1. That a sufficient amount shall be deducted each month from the teacher's basic salary, not to exceed 8 per cent, to provide, on retirement, a certain annuity.

2. That the deductions are to be invested by the Treasury in bonds for the benefit of the teachers, and a board of investment is created consisting of Treasury officials and two teachers, none of whom draws additional salary because of service on this board.

3. That at the age of 62 the teacher may be retired at her own option or at the option of the board of education. At the age of 70 she shall be retired

unless the board for some particular reason thinks her services should be retained.

4. That at the age of 52 the teacher, if disabled mentally or physically, may be retired.

5. That when retired the teacher shall receive each month until her death a sum made up of two different accounts, the first being 1 per cent of the average basic salary for each year of service, and the second $6 for each year of service. To illustrate: A teacher retiring at 62, after 40 years of service, having had an average salary of $1,000 a year, would receive $10 multiplied by 40. Then she would get $6 for each year of service, which would be 6 times 40—$240—or a total salary of $640 a year. Of that amount 63 per cent would be contributed by the teacher herself from her own savings, and the remaining 37 per cent by the Government.

6. That there shall be a minimum for the ages of 62 and 70 of $480, and for the age of 52 of $420.

7. That credit may be given for service outside the District of Columbia not exceeding 10 years, and that the teacher must have been employed continuously in the District of Columbia since 52 years of age and for 10 years continuously prior to retirement.

8. That if the teacher leaves the service before the age of 62 or before retirement, she shall receive her savings, with interest, in one lump sum.

9. That in the case of death the savings shall go to the family of the decedent.

10. That the act be applicable to all teachers on the rolls of the District of Columbia in June, 1917.

11. That continuance in the service after the passage of the act is declared to be consent to the provisions of the act.

12. That teachers may be discharged as before.

13. That an appropriation of $50,000 be set aside for payments up to June 30, 1919, and $5,000 for the expenses of operating the system.

14. That the annuity shall be exempt from attachment or execution for debt or taxes.

SUMMARY.

1. The movement, providing for retirement funds for teachers is growing very rapidly, for it is recognized that the welfare of the children fully justifies such provision.

2. The type which is coming into general favor is one having the following features: A fund derived in part from the beneficiaries and in part from the State; joint control by the State and by the participants; operations placed on an actuarial reserve basis, the rates of payment into the fund to be scientifically determined; benefits provided for superannuation, permanent disability, withdrawal from service, death in active service or after retirement, and compulsory retirement at a specified age.

IV.—INSUFFICIENT MAINTENANCE LIMITS THE ACTIVITIES ATTEMPTED.

1. THE SCHOOL DEPARTMENT OFFERS NO KINDERGARTEN WORK.

Though the kindergarten is the youngest member of our educational family, its active growth in this country falling well within the last half century, yet it has won its way to an established place in our school system, as a glance at the record of the growth of the movement will show. The first kindergarten in this country to be organized in connection with the public-school system, was established in Boston in 1870, but was discontinued after a few years. For 20 years the movement grew very slowly, so slowly, in fact, that by 1890 it had secured legal recognition in but a half dozen States and formal adoption in no more than 5 or 6 of the larger cities and in but 25 or 30 of the smaller. Now, however, nearly every State in the Union has permissive kindergarten legislation and, as shown by the 1915–16 statistics of the United States Bureau of Education, 1,228 cities report a total of 8,463 kindergartens with an aggregate enrollment of 434,022 children and employing nearly 9,000 teachers.

BASIC PRINCIPLES OF THE KINDERGARTEN.

Froebel, the founder of the kindergarten, conceived the true educational process to be one which is rooted and grounded in the child's own spontaneous self-activity; for, he held, the impulses which cause humanity to aspire to progress are instinctive and will be expressed spontaneously in childhood through play if opportunity be afforded. He believed, therefore, that the play impulse, so characteristic of young children, should be looked upon as the chief agency in education. So he insisted that children be permitted to play with the same freedom that they would exercise if at home, and yet, withal, that this play be conducted under the eye of a teacher who should be wise enough to organize and interpret these expressions of the child's instincts and give them significance without inhibiting the exercise of his spontaneity.

The various play activities of childhood, Froebel held, fall naturally into two groups: That in which the qualities of a social character, such as cooperation, subordinating individual desire to the group will, and the ability to give and take, are developed; and that in which the child gains certain necessary sense impressions and perceptions. To the first of these belong group games, such as games

of skill and dramatic games, in which children impersonate such social workers as the farmer, the carpenter, and the housewife. Activities belonging to this group require no material equipment. To the second belong the activities centering about the playthings or "gifts" which he proposed to place in the child's hands at successive intervals and the various manual "occupations" which were designed by him to keep pace with the child's growth and interest. By means of the "gifts," arranged in series, and the activities associated therewith, the child is to be made conscious of the simple but fundamental ideas of color, of form, of number, of dimension, of weight, of sound, and of direction and position. Through the "occupations" which he outlined opportunity is provided, he holds, for an exercise of the powers of perceiving, observing, thinking; and for the gaining of certain artistic appreciations through constructing things having harmonious and pleasant forms.

The kindergarten practice in this country has received an extremely searching examination and appraisal, for it has been forced to square its principles and methods by criteria which have come into our present-day thought as a result of investigations in the fields of physiological psychology and of child-study and through the contributions made to the discussion by the Herbartians. These criteria have profoundly modified kindergarten theory and practice as set forth by Froebel and interpreted by his followers, but the Froebelian conceptions that education is a process of development rather than one of instruction; that play is the natural means of development during the first years; that the child's creative activity must be the chief factor in his education; and that his present interests and needs rather than the demands of the future should determine the material and method of instruction are all conceptions which are sanctioned by the conclusions reached in the fields of modern educational investigation and research. In consequence of this critical examination kindergarten practice has been profoundly modified, but the fundamental things for which Froebel stood, and upon which kindergarten activities are based, are more generally endorsed than ever before, and it can confidently be said that the kindergarten is now so thoroughly established in public confidence and so strongly grounded in accepted theory that its place in our school system will never again be seriously endangered.

THE INFLUENCE OF THE KINDERGARTEN ON PRIMARY EDUCATION.

In turn, the kindergarten idea is having a reciprocal influence of far-reaching character on the aims and methods of elementary education, especially of the primary grades. Beautifying the schoolroom with pictures and plants; the introduction of movable desks and

chairs in the lower grades; the substitution of songs and games and dramatic plays for the formal drills and the rigid, repressive discipline; the appeal to the child's fancy through story-telling; the sympathetic attention to the child's physical needs; the use of out-of-door excursions and work with garden plats; the employment of many forms of handwork in the schoolroom; and the growing practice of having the long vacation come during the inclement winter months instead of during the summer, an arrangement especially suited to little children; are some of the results of the recognition in the grades of the validity of the principle underlying kindergarten activities, that education comes by way of the child's own self-activity.

EFFECT OF KINDERGARTEN TRAINING ON PROMOTION.

While the kindergarten is primarily concerned with the content of education and its spirit and with the fullness of the life of the child, matters which do not lend themselves to statistical evaluation, nevertheless studies have been made which tend to show that the child who has had kindergarten training is likely to make more rapid progress through the grades than those who have had no such training. A study made in Kenosha, Wis.,[1] for example, based on the records of 925 children who had had kindergarten instruction and 738 children who had entered school without such training, while not conclusive, suggests that the first group had fewer who were retarded in their later school work. Supt. Harvey, of Pawtucket, R. I., found in his schools that 60 per cent of the children entering school under the age of 5 years and 3 months, without kindergarten training, failed of promotion against 35 per cent of those who had had kindergarten training. Of those entering whose ages fell between 5 years 3 months and 6 years, 39 per cent failed who had had no kindergarten training against 16 per cent of those who had been through the kindergarten. And of the children 6 years and over, the failures in the two groups stood at 21 per cent and 10 per cent, respectively.

A more recent study of the effect of the kindergarten in lessening the number of repeaters is that by a committee appointed in 1915 of the superintendents and school boards branch of the Michigan State Teachers' Association, reported by Berry. The report shows that this question of the influence of the kindergarten was studied in the records of one group of schools in the Lower Peninsula region of Michigan which consisted of 94 towns and cities, 19 of which were without the kindergarten and 75 having this form of organization.

[1] Bradford, Mary D.: The Kindergarten and its Relation to Retardation. Nat. Educ. Assoc., 1912, pp. 624–29.

The facts regarding repetition, as disclosed by this report,[1] follow:

Influence of the kindergarten on repetition in Michigan.

	Number of cities and towns.	Percentage of repeaters in all grades.			Percentage of repeaters in the first grade only.		
		Boys.	Girls.	Both.	Boys.	Girls.	Both.
No kindergarten	19	13.8	10.2	10.2	27.4	15.6	27.7
With kindergarten	75	11.0	7.8	7.8	15.2	10.4	12.8

That is, in the 19 towns without a kindergarten the percentage of repeaters, all grades considered, is 28.7 per cent greater than in the 75 towns having kindergartens; while in the first grade taken by itself the table shows that the percentage of repeaters in the towns having no kindergartens exceeds the towns having the kindergarten by 69.5 per cent.

The foregoing studies are significant, for they indicate that the kindergarten is an important factor in reducing repetition in succeeding grades and especially in the first grades. It exercises this influence, doubtless, both directly and indirectly; directly in the sense that such training tends to fit a child for quickly "finding himself" in the usual work of the school; and then indirectly by keeping children out of the first grade until they are more mature. Considerable pressure is brought to bear upon school officials in many places where no kindergarten has been established to admit children to the first grade before they have reached the age of 6. A percentage of repetition, therefore, in the first grade in such schools is due to the immaturity of such children. A study of this factor in causing repetition has never been made, it is believed. However, in the Michigan study, just referred to, it was found, for example, that in the 19 towns having no kindergarten 33 per cent of the enrollment of the first grade were not older than 5 years when they entered school, whereas among the 75 cities having the kindergarten this percentage was reduced to 7.8 per cent.

Another study of significance, but along a different line, was made by the superintendent of the Boston schools in 1913.[2] He asked 49 kindergarten teachers to do advanced kindergarten work with the children of 60 classes in the primary grades for two afternoons a week, continuing for a year. Great freedom was permitted in the choice of activities and in the arrangement of the program. Advanced "gifts" and handwork were used in most of the classes, the former for free construction and for number work, the latter for hand training and

[1] Berry, C. S: A Study of Retardation, Acceleration, Elimination, and Repetition in the Public Elementary Schools of Two Hundred and Twenty-Five Towns and Cities of Michigan.

[2] Report of the United States Commissioner of Education, 1914, p. 349.

for free expression of experiences. Games were played, stories were told, and many excursions were taken to the woods, parks, farms, and beaches, providing rich materials for conversation and for expression through handwork. At the close of the year 60 primary-grade teachers, who were the regular teachers of the classes, were asked for reports and frank comments on the experiment. All but one reported favorably, while many spoke of the results in terms of enthusiasm.

THE SITUATION IN COLUMBIA.

In Columbia there is a considerable sentiment favorable to the kindergarten, as witnessed by the fact that several private kindergartens have been established in the city, and one free kindergarten supported by the Sunshine Society of the King's Daughters and holding its sessions in a spare room of the Blossom Street public school. As with most philanthropic enterprises which depend upon voluntary contributions, support of this kindergarten is intermittent, spasmodic, and inadequate. At the time this room was visited the teacher had not been paid her salary, a modest sum at best, for several months. Besides carrying on her regular work with 35 children without assistance, she was supplying hot luncheons for them as well. Despite the meagerness of her equipment, which had been donated by various individuals, good work was being done. With the vacant rooms now to be found at several of the schools, it would be a simple and relatively easy matter to take over this work already begun and extend it by establishing the kindergarten at other desirable centers. In the doing of this, practical questions concerning organization and administration will arise. To meet requests for information as to current practice among the kindergartens of the country the United States Bureau of Education has issued a summary which can be obtained without charge upon request.[1]

SUMMARY.

1. The kindergarten has secured an established place in the American public school system.

2. It is based on the belief that the true educational process is one founded on the child's spontaneous self-activity. This conception, advanced by Froebel, has been supported and reenforced by modern educational theory.

3. The kindergarten training helps a child to make an adjustment to school conditions, keeps children out of the primary grades until they are more mature, and lessens the number of repeaters in the primary grades.

4. There is already considerable sentiment in Columbia favorable to the kindergarten, in response to which a private class has been

[1] United States Bureau of Education, Kindergarten Education Circular, 1917, No. 2.

organized in the Blossom Street school. This should be taken over by the school department and similar classes organized in other schools.

2. ONLY A BEGINNING MADE IN PROVIDING OPPORTUNITY FOR THE EXCEPTIONAL CHILD.

The contrast between the "old" and the "new" education, with their resultant types of schools, is not more marked in any particular than in the treatment accorded the defective and exceptional child. Formerly all children—normal, abnormal, subnormal, physically defective—were dumped together into the same hopper and ground through the educational mill just as though they possessed identical needs and equal abilities. Indeed, the requirements and procedure of these schools were formulated consciously for the "average" child. Newer education, however, recognizes that there is no such thing as the "average" child, and that, in point of fact, each child is an individual who differs from every other in capacity, in energy, in enthusiasm, in needs, in physical characteristics, in personal initiative, and, indeed, in every quality which enters into that complex organism which we call the child.

HOW THE NEEDS OF EXCEPTIONAL CHILDREN ARE MET.

The recognition of this fact has resulted in the devising of a number of plans which have made the school of very much more worth to the individual. These plans fall into two groups—one in which it is not required that the exceptional children of a given class be separated from their fellows; and the other, one which is based on the idea of segregation.

Permitting different groups to progress at different rates through the same course of study is an example of the first group of practices to secure greater flexibility. So also is the plan of modifying the course of study in the interest of different groups of individuals, whereby pupils are exempted from taking such subjects as technical grammar, advanced arithmetic, high-school mathematics, in order that special talent in music or in art may be developed. Again, certain schools, without segregating pupils, permit some who have difficulty with those studies requiring considerable abstract thinking to take subjects in which work with shop tools or with household equipment predominates. The plan of individual instruction is still another method which is designed to meet the needs of the individual without obliging him to be separated from his group.

On the other hand, there are a number of children in every system who diverge so far from the normal that for their own welfare and for the welfare of those with whom otherwise they would be asso-

ciated segregation into special groups or classes has been found to be necessary. Special classes for the deaf, the blind, the feeble-minded, the educable epileptics, the tubercular, the non-English-speaking foreigners, the markedly over-age, the refractory and troublesome, the specially gifted, as well as for those who are unable for any reason to attend the day school session, are examples of plans based on the idea of segregation which have been adopted by various school systems in the effort to minister to the needs of all.

THE PROBLEM IN COLUMBIA.

In but two ways has Columbia been able to make a start toward introducing modifications of school organization and of school procedure in the interest of the individual child of exceptional needs, namely, through the vacation school and through the evening schools which have been organized at two points for mill school children of elementary grade. So far as other exceptional children are concerned, if they enter school at all, they either make their adjustment along with the others or else they drop out of school altogether. There are to be found in the system, however, a number who are persisting in their attendance upon the grades and yet who, because of physical or mental handicaps, are getting very little from the schools, while greatly hindering the progress of others in their classes. The following table shows the number in the Columbia schools who, in the estimate of the teaching corps, should be placed in separate classes for special instruction.

Exceptional children distributed according to schools.

	Epileptic.	Feeble-minded.	Deaf or nearly so.	Blind or nearly so.	Stammerers.	Markedly tubercular.	Non-English speaking.	Refractory.	Specially gifted.	Others.	Total.
WHITE.											
Taylor School	0	4	0	2	1	1	0	2	0	0	10
McMaster	0	6	4	1	3	0	0	3	0	1	18
Logan	0	6	3	6	4	1	0	7	3	25	55
Shandon	0	1	2	0	2	1	0	0	7	0	13
Waverley	0	2	0	0	0	0	1	1	0	0	4
Blossom Street	0	9	1	0	0	0	0	4	0	2	16
Granby	0	0	0	0	1	0	0	0	0	0	1
High	1	1	1	2	1	0	0	1	6	4	17
Total	1	29	11	11	12	3	1	18	16	32	134
NEGRO.											
Howard	1	19	4	8	10	1	0	0	15	0	58
Booker Washington	0	2	0	2	2	1	0	0	4	0	11
Total	1	21	4	10	12	2	0	0	19	0	69
Grand total	2	50	15	21	24	5	1	18	35	32	203

Exceptional children distributed according to grades.

Children.	Grades in white schools.				Grades in negro schools.				Grand total.
	1 to 4.	5 to 7.	High.	Total.	1 to 4.	5 to 7.	High.	Total.	
Epileptic children	0	0	1	1	0	1	0	1	2
Feeble-minded	27	1	1	29	20	1	0	21	50
Deaf, or nearly so	7	3	1	11	4	0	0	4	15
Blind, or nearly so	8	1	2	11	8	2	0	10	21
Stammerers	10	1	1	12	6	1	5	12	24
Markedly tubercular	2	1	0	3	2	0	0	2	5
Non-English speaking	1	0	0	1	0	0	0	0	1
Refractory	17	0	1	18	0	0	0	0	18
Specially gifted	3	7	6	16	7	2	0	9	25
Others	27	1	4	32	0	0	10	10	42
Total	102	15	17	134	47	7	15	69	203

A PLAN SUGGESTED.

Obviously in each of the foregoing divisions of exceptional children there are too few to justify the expense of establishing special classes for each, but by providing three classes for the white children, one for the feeble-minded, one for the blind, and a third for the deaf, the regular classes will be greatly relieved, and much can be done for those unfortunates by placing them in small divisions to themselves in the charge of teachers who are specially trained for their work.

There is another division of pupils, however, who are perfectly normal, but who deviate from established standards because of illness, of absence, of temperamental traits, of transfer from other school systems, or for other reasons, but who, with more individual attention than the regular teacher can give, could easily be brought into conformity to the scholastic requirements of their own or of another and more advanced class. For such as these the device of the ungraded class, or of the "restoration" or "opportunity" class, as it is called in places, has been found to be of much value. To be successful the ungraded class must be small, not larger than 20 or so; must be in the charge of a teacher of exceptional strength; and must be conducted on the basis of individual rather than of class recitation. To this class, usually one in each of the larger schools, are assigned those who need special help. After the purpose has been accomplished for which the pupil was assigned, he is restored to his own group or to an advanced class, if he has been working with promotion in view, and his place given to another. Such a class, organized in each of the larger schools of Columbia, would take care of the "specially gifted," the "stammerers," and the unclassified exceptional children among the whites listed in the foregoing distribution.

As for the negroes, provision should be made in a similar way for the education of the defectives and for other types who deviate from the normal. However, there is as yet so much to be done in the way

of providing opportunity for the normal children of the colored race that but little attention can be given to the defectives, however much it is needed. Clearly, the State in its effort to secure good citizens must provide the means by which individuals may secure the needed training. Furthermore, when the State requires attendance upon school of all children of specified ages, it is peculiarly the responsibility of the State to provide the means whereby all children, abnormal as well as normal, may secure an education. To demand school attendance without providing the opportunity for making such attendance profitable is quite as unreasonable and unprofitable for the negroes as for the whites.

In addition to continuing and extending the work of the vacation and of the evening schools, the survey committee would recommend that, for the exceptional children of the department, three classes for the defectives of the white schools be established and that the department provide transportation for all who can not afford the car fare needed to reach these classes. Furthermore, it recommends that one restoration class be established in each of the larger schools for the benefit of those whose adjustment to the work is not satisfactory. It suggests, further, in connection with the vacation school already instituted, that the movement now on in many parts of the country whereby the vacation school is expanded into one unit of an all-the-year school be investigated.

THE ALL-YEAR SCHOOL.

Columbia holds a vacation school during the summer for both high school and elementary school pupils, attended for the most part by those who have failed in some part of their work during the year and who are trying to make it up. The school is in session for eight weeks and for three hours daily. By extending the period to 12 weeks with a full daily session and making it an integral part of the school organization, many advantages will accrue. The school plant will be used to its maximum; pupils who now require 11 years to complete the entire course will be enabled to cover it in 9 years if they choose to attend continuously; pupils who do not wish to attend continuously can have a choice as to when to take their long vacation; it provides profitable employment for many pupils who otherwise would be running the streets during the summer; and it affords another method for introducing flexibility into our school organization in the interest of the needs of individual pupils, for it enables a child to proceed through the school course at any one of several rates of speed.

At Eveleth, Minn., when this plan was adopted, the year was divided into four terms, each consisting of three school months of four weeks each. The contracts with teachers were changed to call

for a teaching period of three terms each year, though in instances teachers were permitted to teach for the four terms at a proportionate increase in salary. Children were required to attend at least three terms each year, though, upon securing permission, many were allowed to attend for the full time.

Deffenbaugh's study[1] of what is being done in this direction shows that cities where this plan has been tried report that it is received by children, parents, and teachers with much favor. It is proving also that, instead of adding to the expense of a department, it works an economy, as facts which are adduced show. The courses of study, too, are easily reorganized to suit this form of organization. Furthermore, there is abundant evidence to show that, contrary to popular belief, the attendance upon school for 48 weeks in the year is not injurious to a child's health. Indeed, as Deffenbaugh points out, reports on this point from physicians and nurses go to show that children who are out of school during July and August come back in September in poorer physical condition than those who have attended school. One physician, quoted by Deffenbaugh, probably states the situation accurately, when he says:

> If the children could go to the country and live a normal life with plenty of exercise I would favor this to keeping them in school, but since conditions are such that none of the children who are in the tenement districts can go to the country, the best place for them for four or five hours a day is in the schoolroom, on the school playgrounds, and in the school shops and gymnasiums.

SUMMARY.

1. There are now enrolled in the system 203 children who are exceptional in the sense that their needs are such that they should be placed in special classes for individual instruction by teachers definitely trained for such work.

2. To meet the need among the white children, three special classes should be organized; one for the feeble-minded, one for the blind, and one for the deaf. Transportation for those living at a distance and who can not afford the car fare required should be provided.

3. A "restoration" or "opportunity" class should be organized in each of the large schools.

4. The same facilities should be provided for the negro children as soon as the housing needs of the children who are normal have been met.

5. The evening schools should be continued and expanded and the vacation school should be extended into an all-year school.

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[1] Deffenbaugh, W. S. Summer Sessions of City Schools. U. S. Bureau of Education, Bulletin, 1917, No. 45, pp. 20–29.

3. NO INSTRUCTION IN AGRICULTURE GIVEN AND NO WORK OFFERED IN SCHOOL-SUPERVISED HOME GARDENS.

AGRICULTURE IN THE HIGH SCHOOLS.

Columbia is the center of a large rural area. Its location, at the southeastern edge of Richland County, makes it the business center of Lexington County and of large sections of several other counties. The following table shows the essential facts regarding the extent of the farming industry of Richland and Lexington Counties.

The farming industry in Richland and Lexington Counties.

Farms and value.	Richland County.	Lexington County.
Number of farms	2,748	4,486
Native white farmers	857	3,133
Foreign-born (white) farmers	9	5
Negro and other nonwhite farmers	1,872	1,348
Percentage of land area in farms	53.1	84.7
Percentage of land area improved	47.7	35.1
Average acres per farm	75.5	100.7
Average acres, improved, per farm	36.0	35.4
Value of all farm property	$6,427,738	$10,744,463
Average value per farm	$2,339	$2,395
Value of the land per acre	$21.29	$15.58

OWNERSHIP AND TENANCY OF FARMS.

In Richland County less than one-half of the farm land is improved, and the production per acre is low. This low production is due to the one-crop system and to the large number of tenants who operate the farms. Near Columbia the number of farms operated under the tenant system is larger than in the more remote counties, due to the fact that large numbers of farm owners live in town. Of the 2,748 farms in Richland County, 1,826 are operated by tenants, 1,549 of whom are negroes. In the farming section of the county there are two negro farmers to every white farmer.

A summary of the facts concerning the ownership and tenancy of farms in Richland and Lexington Counties follows:

Ownership and tenancy of farms.

	Richland County.	Lexington County.
Farms operated by owners	901	2,499
Percentage	32.8	55.7
Native white	575	2,268
Foreign-born white	8	5
Negro and other non white	318	226
Farms operated by tenants	1,826	1,979
By share tenants	211	1,080
By share-cash tenants	9	53
By cash tenants	1,460	752
Tenure not specified	146	94
Color and nativity of tenants:		
Native white	276	858
Foreign-born white	1	0
Negro and other non white	1,549	1,121
Farms operated by manager	21	8

With the large number of farms shown in the forgoing table operated by tenants, it is hardly to be expected that the best agricultural methods will be followed. Cotton and corn are the principal crops, and on the tenant farms the same crops are often replanted on the same land year after year without respect to the reduction in the fertility of the soil. When the soil gets too poor, the tenant can move.

VOCATIONAL POSSIBILITIES OF AGRICULTURAL TEACHING.

The growth and wealth of the city and county are interdependent. To promote growth and increase wealth, an improvement in agricultural knowledge is necessary. Even in the city agricultural instruction is needed. Many of the city men now own farms that their sons will be required to operate or of which they must direct the operation. To the large number of boys leaving school, agriculture offers the most promising field of vocational employment. To be able to increase the agricultural wealth of this section, these boys must, however, receive practical agricultural training. The keynote to agricultural instruction centers in the high school. At the present time the Columbia high school does not offer any courses in agriculture. The only related subjects now taught are physics, chemistry, and biology, which are elected by only a few students and are taught in an academic way.

The vocational possibilities of agriculture are so great in the region about Columbia that strong courses in agriculture should be organized at once. The organization of successful school-directed home gardening in the grades should depend for its direction and supervision on the high-school agricultural department.

WHAT THE COURSE IN AGRICULTURE SHOULD BE.

1. Agriculture as a vocational subject should be given a prominent place in the high-school course of study. The subject should form the center of a course rather than be an elective in many courses.

2. The agricultural instructor should be employed for 12 months each year.

3. The full time of the agricultural instructor should be given to his subject, and he should not be burdened with other duties or routine.

4. The course should be so arranged that by combining the students graduating in odd years in a single class and the even-year pupils in another class, one instructor can direct the project work and study of each of his pupils during a full half of the school time through a four-year course. The following are recommended: Kitchen garden, first year; small animals, second year; farm animals and farm crops, third year; and fruit growing and market gardening fourth year—moving from the simpler to the more complex forms, a logical method of approach to the subject.

5. All high-grade students taking agricultural courses should be required to conduct home projects, and credits should be withheld until the projects have been completed and approved by the high-school instructor.

6. It is recommended that in the Columbia high-school agricultural department the students give half time to the study of agriculture vocationally and half to the study of cultural subjects. The division of time recommended in the Massachusetts Board of Education Bulletin 1916, No. 23, has proved very satisfactory in many parts of the country.

SCHOOL-DIRECTED HOME GARDENING IN THE UPPER GRADES OF THE ELEMENTARY SCHOOL.

Of 852 boys reporting from the fourth, fifth, sixth, and seventh grades of the white grammar schools, 566 or 66 per cent had no money-earning employment after school hours or on Saturday. During the vacation last summer, 546, or 64 per cent of all white boys reporting, were not employed outside the home in money-earning occupations. For work after school hours and on Saturday the average earnings of the children were $2.70 per week. The average earnings for the last summer vacation were $4.34 per week. Of the 852 boys, 601 state that they have some home duties, but in most cases these duties are irregular and of small economic value to the home. The average number of hours per week that the boys are employed in home work is only five. Two hundred and twenty-six boys receive some pay for their home work.

Of the 873 grammar-school girls, 841, or 96 per cent, report that they have no money-earning work outside the home during the out-of-school hours, and 848 of them, or 97 per cent, were not employed during the last summer vacation. Of the small number who were employed, the average earnings were, after school and Saturday, $1.85 per week and $3.59 per week during vacation. Of these girls, 519 claim some duties in the home, but the average number of hours worked per week is only four.

The following table shows the important facts regarding the occupations and employment of children of the white elementary schools belonging to the fourth, fifth, sixth, and seventh grades.

Work of white children of the fourth, fifth, sixth, and seventh grades.

Children.	Boys.	Girls.
After school and on Saturdays.		
Number reporting	852	873
Number employed	286	32
Number not employed	566	841
Percentage not employed	66	96
Average earnings per week of those employed	$2.70	$1.85

Work of white children of the fourth, fifth, sixth, and seventh grades—Contd.

Children.	Boys.	Girls.
Vacation employment.		
Number reporting	882	873
Number employed last summer	306	25
Number not employed	546	848
Per cent not employed	64	97
Average earnings per week of those employed	$4.34	$3.59
Home work.		
Average number of hours per week that children are employed in home duties	5	4
Number who have home duties	601	519

EMPLOYMENT OF NEGRO ELEMENTARY SCHOOL PUPILS.

Of the 225 boys reporting from the two colored grammar schools, 97 do not have money-earning occupations outside the home after school and on Saturday, and 68 were not employed last summer. The average earnings of these colored boys were $2.29 per week after school and on Saturday and $2.89 during vacation. One hundred and seventy of the boys have home duties which occupy their time on an average of eight hours per week. Twenty-seven boys receive pay for home work.

Of 514 girls reporting from the four upper grades of the colored school, 217 do not have money-earning work outside the home after school or on Saturday, and 401 were not employed last summer vacation. The girls who were employed earned $1.46 per week for work while school was in session and $2.17 per week in vacation. Of the girls, 399 have 11 hours of home work per week and 135 receive some money for this home work.

The following table shows the important facts regarding the occupations and employment of children of the fourth, fifth, sixth, and seventh grades of the negro schools.

Work of negro children of the fourth, fifth, sixth, and seventh grades.

Children.	Boys.	Girls.
After school and on Saturdays.		
Number reporting	225	514
Number employed	125	97
Number not employed	97	417
Per cent not employed	43	81
Average earnings per week of those employed	$2.29	$1.46
Vacation employment.		
Number reporting	225	514
Number employed	157	113
Number not employed	68	401
Per cent not employed	30	78
Average earnings per week of those employed	$2.89	$2.17
Home work.		
Average number of hours per week that children are employed in home duties	8	11
Number who have home duties	170	399

SUMMARY OF BOTH RACES.

Of the total number, 2,464, reporting from all schools, both white and colored, 543, or 22 per cent, were employed after school and on Saturday, and 601, or 24 per cent, were employed during the last summer vacation.

In the white schools the boys were employed in home duties 5 hours per week and the girls 4. In most cases these home duties are indefinite and do not require any regular amount of time. The colored boys are engaged in home work for 8 hours per week and the girls 11.

AVAILABILITY AND ADAPTABILITY OF LAND FOR GARDENING.

Of the 1,728 children reporting from the white schools, 27 live in apartments, tenements, or flats where the back-yard space must be used by two or more families. The teachers of the upper grades of the six white schools report that 450 children have at least 400 square feet available for gardening, 189 have 800 square feet, and 197 have 2,500 square feet; 836 thus have 400 square feet or more in their own back yard that could be used for gardening. In practically all schools districts, with the possible exception of the Waverley and Blossom Street districts, there is enough land for every child to have a plat of 400 square feet or more, either in the home back yard or on vacant lots. There are large vacant tracts of land near the Waverley School, and the majority of the children attending the Blossom Street School come from parts of the city not as congested as that near the school building. The Shandon School district is ideal for the carrying out of school-directed home gardening, as the home lots are large and there is a large amount of vacant land. The Taylor, McMaster, and Logan Schools are in the older sections of the city, where the vacant land has been largely built upon. The house lots in the Taylor and McMaster districts are large, and in a large per cent of the homes there is enough back-yard space for the production of vegetables for the family. The planting of many shade trees has rendered some of these yards unfit for gardening, and in others much of the space has been used for the planting of "old-fashioned gardens" of flowers and flowering shrubbery. In the Logan School district the lots are smaller and there are fewer vacant areas. To the west and north of this district there are open farming districts that are within walking distance.

The soil in Columbia is a light sandy loam, ideal for gardening. The ridge on which a large part of the city is located is a continuation of the famous Dutch Fork truck crop section to the north of the city, and a smaller commercial vegetable-growing district is located on the same ridge to the south.

THE SOIL SURVEY OF RICHLAND COUNTY.

The Bureau of Soils of the United States Department of Agriculture, in a "Soil Survey of Richland County," gives the following account of this soil:

The Orangeburg sandy loam is not widely distributed, being largely confined to a belt extending from a point near Columbia almost to the Wateree River. The city of Columbia and a number of its suburbs are situated largely on this type. Two areas occur in the Sandhill region. This type is most closely associated with the Marlboro sandy loam.

The surface over the greater part of the type ranges from nearly level to gently rolling. A few fairly steep slopes occur, but none of the land is too steep or rough for the use of improved farm machinery. All the type is well drained, but erosion is active in only a few places.

Its high-productive capacity makes this a relatively important type. Practically all of it is in cultivation, except the areas occupied by the city of Columbia and its suburbs. The type has only a moderate content of organic matter, but its power to hold moisture is comparatively good, and it is easily tilled. It responds readily under good farming methods, and is one of the best general farming soils in the State, being especially adapted to cotton.

Cotton is the leading product and the money crop. Corn follows closely in acreage, with oats and cowpeas next in importance, the former usually being cut for foliage. The type is not used for trucking to any considerable extent. Peaches are grown on a small scale for home use. Cotton ordinarily yields from one-half to one bale per acre, but as much as one and one-half bales per acre has been produced by a few farmers. Corn under good management yields from 25 to 50 bushels per acre, but the average return is between 15 and 20 bushels. Oats yield from 20 to 35 bushels per acre. The yield of cowpea hay ranges from 1 to 2 tons per acre.

The farming methods and fertilizer practices on this soil differ little from those on the Norfolk sandy loam. No cover crops are grown, and green-manure crops are grown by only a few farmers. Cowpeas are quite commonly grown in cornfields and after oats, but the seed is gathered and the vines are either pastured or cut for hay; so that the full benefit of a green-manure crop is not obtained. No other legumes are grown. In cotton and corn growing little or no care is used in the selection of seed. The only change in crops is from cotton or corn, with cowpeas or oats occasionally intervening. Most of the steeper slopes are terraced, but in some places the terracing has been poorly done. A large part of the type is farmed by tenants.

The sale value of farm land of this type ranges from $50 to $100 an acre, except in the immediate vicinity of Columbia, where it is held at a much higher price.

The subsoil structure of this type is such that there is considerable run-off, unless the surface is nearly level. All slopes subject to erosion should be farmed under the contour system. If this is not effective in checking erosion, terraces should be constructed at frequent intervals. Slopes too steep to protect by terracing should be used for permanent pasture or reforested. A good means of protecting the surface is the growing of winter cover crops, such as winter grains, cowpeas, and vetch. The vegetation not only serves to protect the surface from erosion but contributes to the organic-matter content when plowed under in the spring. The use of lime would be beneficial in connection with green manuring. Deeper and better plowing and frequent shallow cultivation of crops would make the soil more retentive of moisture. The

adoption of systematic crop rotations on this soil is advisable, and a greater diversity of crops should be grown, so that cotton would be a surplus product and other crops be grown extensively enough to supply the home and farm needs. Fruits, especially peaches, could well be grown commercially. Peach orcharding is successfully engaged in on this type elsewhere in this State and in Georgia.

The climatic conditions in Columbia are such that practical vegetable gardening can be carried on for the greater part of the year. The rainfall is generally well distributed throughout the year and by careful cultivation can, in most years, be conserved for the production of all crops without resorting to artificial watering. The city water is sold on a relatively high meter rate, which makes the use of city water in the vegetable garden expensive.

PRESENT AGRICULTURAL INTERESTS OF THE HOME.

In order to determine the value of instruction in the scientific care of gardens and of small animals of economic importance, it is necessary to learn in what percentage of the homes, gardens are made, and in what percentage animals of economic importance are kept. From a report of 1,728 pupils it has been found that in 812 white homes some kind of garden is made, and 459 children claim to have gardens of their own or are helping with the family garden. Many of the gardens are small and some of the children have reported lawn flower plats as gardens. The production is much less than should be the case if the gardening were done scientifically throughout the year. Poultry is kept at 302 homes, pigeons at 138, and rabbits at 51. In visiting the back yards it was found that the people need many lessons on the care and feeding of animals and especially on the keeping of animals in a sanitary condition. The pigeons and rabbits were in most cases kept as pets.

Of the 739 colored children reporting, 388 state that there is a garden in their home, and 188 children claim some share in the garden work. Poultry is kept at 268 homes, pigeons at 66, and rabbits at 10. The necessity for instruction in the care of these animals is greater than in the white homes, as the yards are smaller and less sanitary.

RELATION OF IDLENESS AND NONCOMPULSORY SCHOOL ATTENDANCE TO JUVENILE OFFENSES.

It was impossible to get as complete statistics of petty offenses and juvenile play activities that bring children into court as has been the case in other cities where surveys were made. Juvenile cases in Columbia are brought before the judge who hears adult cases. A definite record of juvenile cases was available only for the year 1917. During that year 529 cases of children between the ages of 8 and 17

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It is thought that the results are typical of what may be found on any school day.

Interviews with 90 of the children brought out the fact that 28 were enrolled in school; 54 were not enrolled; and the remaining 8 made no statement on this point.

The reasons given for their nonattendance at school were as follows:

Sickness and vaccination	18
Working and helping at home	18
Poverty, no clothes, no books	13
Family moved or moving	13
Don't want to go	8
Parents indifferent	7
Truancy	6
Refused to answer	4
Expelled	3

As to the ages of these children, the following shows the distribution:

Ages	6	7	8	9	10	11	12	13	14	15	16
Number	4	12	7	10	13	8	5	9	9	6	7

Of the 28 children who were enrolled in the schools but who were on the streets, the following shows the distribution by age and by sex:

Ages	6	7	8	9	10	11	12	13	14	15	16
Boys	0	2	0	2	3	2	2	2	1	4	2
Girls	0	2	1	1	2	2	0	0	0	0	0
Total	0	4	1	3	5	4	2	2	1	4	2

From this investigation it would seem that about one-third of the children of school age who are out of school are enrolled in school, but not attending regularly. In certain parts of the city, especially the western part, there are certain localities where it is evident that there are large numbers of children of school age who are not attending school.

As shown by the lack of clothing, books, and the employment of children, poverty is an important factor in causing this irregularity of attendance as well as the failure to enroll in the schools. Nevertheless, this can be overcome in large measure through cooperation with the Associated Charities, and through the help of benevolent individuals. Though, without doubt, poverty is responsible for much of it, the chief factor in producing this situation is the indifference of parents. The need of the hour is the devising of some way of overcoming this failure of many parents to recognize the value of education to their children.

The need of an energetic enforcement of the compulsory attendance law is clear. With an efficient attendance officer who followed up every case of nonattendance promptly, this situation would soon be rectified.

PRESENT TRAINING AND POSSIBILITIES FOR FUTURE TRAINING OF THE CITY TEACHERS IN HOME GARDENING.

The principal of one white school reports that one teacher in his school is qualified to direct garden work and another reports that one teacher is partly prepared for this work. In the colored schools, one teacher in the Booker T. Washington School is training to direct the home gardening of children, but the Howard School does not have a teacher qualified to engage in the work.

At the present time practical courses in gardening are not given in any school in Columbia. The University of South Carolina offers several courses in agriculture. Teachers who wish to get special training for this work could do so in summer schools; however, teachers with native ability would gain as much by enlisting the children in school into home-gardening classes and studying books and bulletins on the subject.

In organizing a high-school course in agriculture, as outlined in the first section of this report, the high-school teacher of agriculture should become supervisor of the home-garden work of the grade children and should train garden teachers for each school.

Based on the number of children reporting from the upper grades of the grammar school, the following number of teachers would be required to direct the home gardening of the pupils: Blossom Street School, 1; Logan School, 3; McMaster School, 3; Taylor School, 2; Shandon, 2; Waverley, 1—twelve in all. This does not mean that 12 extra teachers should be employed, but rather that 12 of the regular teachers should be paid an extra salary for work after school and Saturday and during the summer vacation. On the basis of salaries paid teachers in other cities for this work, the teachers should receive an extra salary of $10 per month for working after school and on Saturday for the nine school months, and $50 per month for the three vacation months, or a cost of $2.40 per teacher, requiring $2,880 for the 12 teachers.

In the colored schools 3 garden teachers would be required in the Booker Washington School and 4 in the Howard School, which, on the same time and salary basis, would cost the school department $1,685.

By this plan 19 garden teachers would be employed to direct the productive occupation of the 2,464 pupils, or 130 pupils per teacher, during the out-of-school time.

The total cost to the city would be $4,565, from which investment $24,640 would be returned if each child netted only $10 for his year's work. Four or five times this amount should be produced.

SCHOOL-DIRECTED HOME GARDENING AS A PART OF THE SCHOOL CURRICULUM.

In the foregoing sections of this report it has been shown that a large percentage of the Columbia school children do not have definite occupation during the hours that they are out of school; that at least half of the daylight hours and half of the days of the year are spent out of school; that gardening and other agricultural activities of the city homes could be increased in money return by education; that there is enough vacant land in back yards and vacant lots to furnish a garden for practically all school children; that the soil is ideal for gardening and that the climatic condition is very favorable for year-round gardening; that a large number of boys commit juvenile-court offenses, which seems to have a direct relation to the large amount of time that the children are idle; that a large number of children do not attend school, and that of those who are enrolled the attendance is not regular, which facts may be partly attributable to the academic nature of all of the school work and the lack of manual work that appeals to the child and helps hold him in school; that only three teachers are now trained to direct garden work, but that a sufficient number could be trained in the high-school agricultural department to accomplish the work in all the schools; and that gardening as a part of school work would cost the city $4,565, from which investment more than $100,000 of wealth should be produced, not to mention the educational value which would accrue from the work.

THE RECREATIONAL ACTIVITIES.

The playground and recreation activities in the city are now organized as a department of municipal recreation without official connection with the schools. The supervisor of playgrounds directs organized games at the schools during the recess and noon-hour periods, and in the summer the playground teachers use the school grounds as play centers. In the main the cooperation between the school and playground department is working out harmoniously, but because the playground work is not considered a school activity the toilets and basement rooms for dressing rooms and storage are not open to the playground teachers and children. The supervisor as an official of the school department would, under the direction of the superintendent of schools, become a part of the teaching staff and could have direct access to the children at all times and freedom in the use of buildings and equipment. The supervisor of playgrounds should then have charge of organized games at recesses,

train the public-school teachers to conduct calisthenic relaxing exercises between class periods, utilize school grounds for the play of children and adults, and use the school buildings as community centers. As a part of the school system the recreational department should be most effective and eventually would be more economical to the city.

In his report for the school year 1916–17 the superintendent of schools recommended that the school board employ a director of physical culture and athletics, both in the school and on the playground and also that a larger use of school buildings as community centers be made. To establish such departments in the schools and to continue the work of the department of municipal recreation would mean a double cost to the city and an overlapping of effort. The work of both these departments is highly educational; the schools are or should be the centers of population and several of the Columbia schools have large playgrounds. Considering the question of recreation from all standpoints, it seems that it would be more efficient and more effective if placed under the control of the board of education.

SUMMARY.

1. That agricultural courses be introduced in the Columbia High School and that the instructor be employed for the full year.

2. That the instructor in agriculture require all pupils to complete an agricultural project at home which will illustrate the work of the school year. That the instructor visit the projects and give instruction in the scientific carrying out of the agricultural problem.

3. That the high-school instructor in agriculture be required to supervise the grade teachers in their direction of home gardening and to train these teachers.

4. That 12 teachers in the white schools and 7 in the colored schools be employed after school, on Saturdays, and during the vacations to teach school-directed home gardening.

5. That the 19 teachers to be employed be taken from the regular grade teachers who have been trained to do garden work by the high-school teacher of agriculture. That these teachers be paid an extra salary for extra work.

6. That the department of municipal recreation of the city be made a department of the schools, under the direction of the superintendent of schools, and that the department embrace all play-ground activities, the physical exercises of the schools, and the activities of the adult recreation and community centers.

4. NEITHER MANUAL ARTS NOR HOUSEHOLD ECONOMY TAUGHT IN THE ELEMENTARY GRADES AND BUT LITTLE IN THE HIGH SCHOOLS.

HOME MAKING THE CHIEF VOCATION OF WOMEN.

However rapidly the door of opportunity among the industries is opening to women, it is still true, and doubtless will always so remain, that for the greater proportion of American women home making is the principal vocation. And, indeed, no greater work for women can be conceived of, for in a very real way the health and material welfare of the Nation rest back upon the intelligent and efficient administration of the home. The battle, for example, to secure sanitary surroundings, to establish the habit of economy, to develop sound and sane thinking on public questions—all of which are necessary to withstand the attacks of disease, to forestall financial panics, to prevent social disturbances of critical character—can never be won except as the homes of the Nation are universally enlisted in the struggle and the home makers are prepared by education and training to execute their tasks skillfully.

The knowledge needed for efficient work in this connection does not come by inheritance, nor is it acquired merely through association with those who have it. Imitation of others and the process of "trial and failure" teach one much, but as methods of preparing for the complex activities of the home they are inadequate beyond a very narrow range. In one department of the home maker's activity alone, that of selecting and preparing foods, the woman who to-day is efficient has a knowledge of food sources, of food production, of the dietetic values of various foods, of the effect of heat upon each, of the healthful combinations which can be made with them, and of how these food combinations can be prepared and served in appetizing ways. Such knowledge presumes some understanding, at least, of several of the sciences and the relation of these to the home. Obviously, imitation and experience alone can never give such a content; specific training under intelligent direction must be had.

An important duty of the school is found just here, for this training needed by the prospective home maker can best be gotten through the medium of the school. The school, therefore, should see to it that before the girl drops out she will have had the maximum training in the arts and the sciences which contribute to home making. The school should provide opportunity for giving such a content to those young women also who are employed and yet who will ultimately find themselves at the head of a household. To a third group, too, the school should open its doors—to the group of adult women who already have homes of their own and yet who have never

had the opportunity to secure the training which will make them skillful and efficient in their households.

THE WAGE-EARNING PERIOD OF WOMEN.

The fact remains, however, that only a small percentage of the number who finally become home makers enter the vocation direct from the school. Many of them, and the proportion is rapidly increasing, spend a time after leaving school in the various wage-earning occupations which are open to women. In meeting the vocational needs of women, therefore, the problem of the school is a double one. First, there is the problem of providing the training which woman in her capacity as home maker will need; and, second, there is the problem of giving her in addition the training which she will need in the industries or professions which she will enter between school and marriage.

The transitory character of the wage-earning period in the lives of women is clearly brought out in a study made in the city of Cleveland by Lutz.[1] Lutz found that in Cleveland 60 per cent of the girls between the ages of 16 and 21 were at work in some wage-earning occupation. Of the group between the ages of 21 and 45 only 26 per cent were so occupied, while of the third group, 45 years and over, only 12 per cent were to be found enrolled among the industries and professions. While the proportions will undoubtedly vary in different cities, yet in this particular at least it is probable that Cleveland is nearly typical of the cities of this country.

Of every 1,000 of Cleveland women between the ages of 16 and 21 Lutz also found the following occupational distribution:

Occupational distribution of 1,000 women wage earners (Cleveland) from 16 to 21 years. (Adapted from Lutz.)

	Number.
Manufacturing and mechanical industries:	
Apprentices to dressmakers and milliners	4
Dressmakers and seamstresses (not in factory)	20
Milliners and millinery dealers	17
Semiskilled operatives—	
In candy factories	6
In cigar and tobacco factories	15
In electrical-supply factories	10
In knitting mills	11
In printing and publishing	8
Woolen and worsted mills—	
Weavers	5
In other occupations	7
Sewers and sewing-machine operators (factory)	53
Tailoresses	25
Transportation:	
Telephone operators	19

[1] Lutz, R. R. Wage Earning and Education, Cleveland Education Survey.

	Number.
Trade:	
Clerks in stores	28
Saleswomen (in stores)	35
Professional service:	
Musicians and teachers of music	6
Teachers (school)	4
Domestic and personal service:	
Charwomen and cleaners	5
Laundry operatives	13
Servants	81
Waitresses	9
Clerical occupations:	
Bookkeepers, cashiers, and accountants	26
Clerks (except in stores)	20
Stenographers and typewriters	62
Not among wage earners	400
Scattered among unimportant occupations	111
Total	1,000

THE TRAINING OF WOMEN FOR THE OCCUPATIONS.

An examination of this table shows that about 20 per cent of those who are wage earners work with the needle; about 10 per cent are in that group of occupations requiring some technical operative skill; 10 per cent are in the stores serving as clerks and saleswomen; 18 per cent are in domestic and personal service; 18 per cent are to be found among the clerical occupations; while the remainder, about 24 per cent, are scattered about in small groups among a number of lesser occupations. Except there should come about some such economic and occupational shift as now obtains throughout the country on account of the war situation, the future occupation of both boys and girls who are in a school system at a given time will in all probability differ but little from the occupational distribution of the adults of the community which obtains at the same time. Such a table, then, worked out for each community, for both women and men, will provide the school with a dependable basis for determining in detail what work it can give which will best meet the needs of those who are going to become the wage earners of the community.

Of the occupational groups of women mentioned in the foregoing table it is clear that the training needed for two of them, the needle workers and the workers in domestic and personal service, will not differ except in degree from that training which is needed by those who are to enter the more permanent vocation of the home maker. As to training for semiskilled operatives and for positions as clerks and saleswomen in stores, the school can not profitably accomplish much, for it lacks the proper equipment and the proper setting; furthermore, training for such vocations can best be obtained, it would

seem, in the vocations themselves. Only one group, then, remains to be considered, that comprising the clerical and secretarial occupations. Even here there is a considerable content of value to the prospective home maker, although certain elements in the training required for office work, while certainly not a hindrance to the home maker, yet are of necessity carried further than would be justified were home making alone to be considered.

It may be urged, however, that it is highly desirable that every woman become sufficiently skilled in some wage-earning occupation so that if she should suddenly become dependent for a livelihood upon her own efforts she will not find it difficult to make the adjustment. Were such training insisted upon, many a tragedy would certainly be averted. The school, therefore, in providing for the needs of the home maker need not hesitate in carrying certain phases of its work to a point where the young women will acquire skill sufficient to make them self-supporting. Indeed, if the school stops short of this point it is in serious fault, for it will not have done its full duty.

In meeting this twofold need of its girls, the school naturally will lean most heavily upon its department of household economy and its commercial department. The courses offered in both these departments should be so arranged that it will be possible to carry the work given from the standpoint of the home maker to such a degree of specialization and of proficiency in the junior and senior high-school periods that with a very little special technical training on the outside the girl can become self-supporting if the need should arise.

THE PROBLEM OF THE VOCATIONAL TRAINING OF BOYS.

With the boys the problem is much more complicated, for the range of occupations open to them and among which they will ultimately be distributed is as wide as business itself. Lutz's study of the occupational distribution of native-born men between the ages of 21 and 45, again referring to the Cleveland survey, shows the following approximate proportions:

Occupational distribution of (Cleveland) men wage earners 21 to 45 years.

	Approximate per cent.
Manufacturing and mechanical occupations	44
Commercial occupations	20
Clerical occupations	16
Transportation occupations	11
Domestic and personal-service occupations	5
Professional occupations	3
Public-service occupations	1
Total	100

As each of these groups includes a number of highly differentiated occupations, it is clear that the school as usually organized, as Lutz points out, will not bring together a sufficient number of pupils who are heading toward a particular occupation to justify, on the ground of cost alone, such differentiated courses as the ultimate vocational distribution would demand. Neither, it may be added, are the intentions of the individual pupils respecting future vocational placement sufficiently well known to justify a high degree of specialization of school courses in the earlier years at least.

THE MANUAL ARTS COURSE.

It would seem, therefore, on account of the immaturity of the boys of the elementary grades and also because there are too few whose future needs are definitely known, that a manual arts course, general in character, is all that the school can profitably offer in this first division of our school system. There is a content here, however, which is of definite value, for by it familiarity with the common tools can be given and some readiness developed in their use in connection with the making of the various common articles for which the manual-training shop provides opportunity. The shop, too, can be made the starting point for valuable general information about the world of industry, so that a foundation, in part at least, can be laid for an intelligent choice of a vocation when the time comes for the decision.

In the junior high-school division (the seventh, eighth, and ninth grades) more pupils are congregated at a given point; they are more mature; their future needs are somewhat more clearly defined in individual cases; and so the school here should find a convenient node for an approach to some of the more common industries and skilled trades. How far the school can go in specialized training for particular occupations here again turns largely upon local conditions respecting funds, equipment, and the grouping of the pupils as to future needs.

THE COOPERATIVE SCHOOL PLAN.

Inasmuch, however, as it would require an equipment prohibitive in cost to prepare fully for the training for any considerable number of the occupations of a given community, the plan is growing in favor of effecting an arrangement between the school and the established industries of the community whereby the pupils, both boys and girls, may spend half of their time in school and the other half in industrial or business plants, getting their training in the industry itself. The plan as developed provides that pupils shall pair off; that one of the pair shall be in school and his alternate in the particular business plant to which he is assigned; and

that at the end of every period, usually two weeks, a shift be made, the one in the school taking his place in the business while the one in the business plant returns to his school classes. Two weeks later the situation is reversed, and so on throughout the duration of the arrangement.

There are many reasons which can be urged in support of this plan of cooperation between the school and the business world. In the first place, it relieves the school of the necessity of installing a very expensive equipment. Then, it is impossible for the school to simulate closely enough the complex conditions under which most vocations are conducted to make the training which it gives of much practical value. Moreover, success in a given vocation often depends more upon adaptability to conditions that can not be reproduced in the schoolroom than upon mere knowledge of technique. Pedagogues can not be expected to teach the technique of specialized vocations any more than blacksmiths can be relied upon to enter the schoolroom and teach Latin. Instead, then, of bringing the great multitude of highly differentiated occupations into the schoolroom, the way out surely lies in taking the school to the occupations.

An approach to the industries, however, can profitably be made in the school shop and school office. The school can systematize, organize, and give an orderly presentation of the chief elements of many common vocations more quickly and more clearly than can years of work under the stress and strain of the activity itself. Then, opportunity can not always be provided for all of the pupils of a school who might desire practical work in their chosen vocation under actual conditions. Moreover, there are many students in both the junior and senior high schools who wish opportunity for general polytechnic experience without committing themselves to a particular occupation.

A combination of these two plans, then, it would seem, would best meet the complex needs of a community in respect to helping its youth in choosing occupations wisely and in giving the requisite special training for success in them.

THE SITUATION IN THE WHITE SCHOOLS OF COLUMBIA.

Formerly both sewing and manual arts were taught in the elementary grades of the Columbia schools, but when the high school was completed it was found that the funds were not sufficient to provide an adequate outfit for the high-school shops and sewing and cooking rooms, so the equipment of the grade schools was transferred to the high-school building and the work in the grades given up.

The high-school curriculum as now organized requires that all girls in the first and second years take sewing and cooking and that

the boys shall take shopwork in manual arts. An "industrial home economics" course is also provided for in the high-school schedule, but none of the girls has as yet entered it. In practice a pupil may sew about one and one-half hours each week and cook for the same length of time, though frequently this time allotment is out down for other things. In an entire semester, as it works out, the aggregate sewing practice which a girl actually gets is not more than the equivalent of two and one-half days of eight hours each. In consequence of this brief time allowance and because of other unsatisfactory conditions the high-school pupil of Columbia becomes no more efficient in sewing and cooking than do children of the sixth and seventh grades of many cities.

Owing to these conditions the girls of the Columbia High School are given no opportunity to become proficient in judging of materials, in choosing designs, in developing a discriminating judgment as to the value of ready-to-wear garments, and in learning to appreciate suitable color combinations. Neither is there time for awakening an intelligent interest in problems relating to hygiene and sanitation, to household construction and furnishing, to household administration and accounting, nor to the nutritional and economic facts relating to foods.

The pupils in sewing do much more "model making" than progressive sewing teachers consider desirable. In the cooking classes the pupils follow closely the adopted text rather than bringing in material for the recitation from the outside. Then, too, their cooking recipes provide for the smallest quantity of prepared food only, a method which is comparable to "model sewing." This procedure is justifiable only when the time limits are such that no other plan is possible.

The method of registration in use in Columbia also reacts badly upon the work of the sewing and cooking teachers. The difficulty of making out individual term programs which do not conflict has led to the custom of permitting pupils in the home economics department to take their prescribed two years of work at any time during the four years of the high-school course. This results in mixed classes in both the sewing and cooking; that is, in classes having pupils of all degrees of advancement. In such a situation class teaching is impossible. In consequence, either the teacher must give up her time to individual instruction or else certain pupils are obliged to repeat work previously done. The same difficulty obtains also in the cooking classes.

The trouble undoubtedly runs back to the fact that in making out the pupils' program, cooking and sewing are given subordinate places, as compared with other subjects, and that whenever an ad-

justment of program is necessary it is made at the expense of sewing and cooking. If these subjects were given more consideration at the time when pupils are registered and schedules made out, the classification of pupils would be much more nearly uniform, resulting in turn in an improvement in the quality of instruction.

CONDITIONS ESSENTIAL TO GOOD TEACHING.

It is useless to discuss the quality of the teaching of home-economics subjects when done under such circumstances. With unprepared students, with classes of varying degrees of advancement, with short and infrequent periods of instruction and with classes which are overcrowded and which have insufficient equipment, good teaching is impossible. A complete change of prescribed course, additional time allotment to home economics, careful classification of students and improved equipment are necessary preliminaries to better teaching. Time to visit schools with modern equipment and standard methods of teaching is particularly needed by teachers of home economics, because this line of work is developing so rapidly that only by strenuous efforts and liberal opportunities for observation can teachers keep abreast of the newer practices in home-economics instruction. With the meager salaries heretofore paid to teachers, the travel and study so desirable for all teachers and so essential, particularly for those employed in teaching a new and unstandardized subject, are impossible.

The present equipment in the cooking laboratory of the high school is fair. The exposure of cooking utensils to dust is most insanitary, however. The desks should have been provided with drawers and the utensils protected thereby. The sinks are too few and are badly located. Congestion around them is inevitable when 22 girls attempt to secure water for cooking or for dish washing. The provision for hot water is so poor that each individual must heat water before washing dishes or cleaning desks, resulting in much waste of time and at the end of the lesson the hurried completion of the work. Neither is the present method of caring for the floors satisfactory. To sweep during the preparation of food is an insanitary practice, and to depend upon the pupils to take the entire care of the floor makes careful scrubbing and cleaning impossible. A food laboratory should be so well equipped and so sanitary in care and construction that it will become a standard for home conditions in both food preparation and in housekeeping.

Furthermore, the requirement that towels for hands and for dishes be brought from home is not desirable. In case infectious diseases exist in any home from which towels are brought there is risk that disease organisms may be left on the dishes which are later used by

other children. To depend upon the children remembering to bring fresh towels to each lesson foredooms the teacher to annoyance and disappointment.

The students in the cooking classes are not required to be as neat and as trim in appearance as they should be. Here also a standard should be set that could be transferred to the home kitchen of the girl. Pantry furnishings are inadequate as now supplied, and the total lack of dining-room furniture makes the teaching of food service impossible. The sewing room is well lighted and pleasant. There is a reasonable supply of sewing machines, but the tables are not of a type that are most convenient for work. So many charts, well illustrated books, wall exhibits, and educational exhibits are obtainable, that no school is justified in not providing these aids for teaching, yet Columbia's department of home economics is without the commonest of these.

It is desirable that pupils in the public schools be given opportunity to study the textile industries of the region and that excursions to the stores and the markets be regularly arranged for and reported upon in the classroom. Such work, where it is handled intelligently, will enable the girls to become intelligent and discriminating purchasers of household supplies. It will tend also to stimulate in them a healthful interest in civic problems.

THE CONTENT WHICH SHOULD BE GIVEN.

Home-economics training for the girls and manual arts for the boys should begin when the children are about 11 years of age. This means the organization of the work in the fifth grade for the usual students and in the fourth grade for over-age children and also for those who will probably leave the schools without entering the high school. Preliminary to definite work of this character there should be handwork for both boys and girls from the first to the fourth grade, inclusive.

The first year of definite instruction in home making should consist of lessons in sewing and housekeeping. Such sewing as is done should be upon articles useful either to the child herself, to her doll, or to her mother, thus providing a motive and incentive. Each assigned task should be of a type that may be completed within a few weeks, that interest may not lag and a distaste for the work develop. In this and in all other home-economics work there should be flexibility in the courses arranged. The ends to be accomplished should be predetermined, but the particular problems to be assigned should be varied to meet the interests of the children.

Crocheting, knitting, tatting, and simple designs in cross-stitching come properly in this first course. The fingers are thereby trained and an appreciation for color and design developed. Paral-

lel with this fifth grade sewing, instruction in the care of household equipment and furnishing should be given. This is the time to teach careful and efficient dish washing, the care of left-over foods, the care of the refrigerator, the nice setting of the table, the dusting of living rooms and the putting of them in order, the making of beds, and the caring for the bathrooms and of the toilet articles. In the mill village section, the second semester might consist of lessons and instruction in personal hygiene. In the sixth grade the sewing should be paralleled by cooking and the practices of good housekeeping constantly reviewed. Here also one-half year may profitably be devoted to sewing and one-half year to food preparation. The use of the sewing machine should be taught in the sixth grade, and thereafter attention should be given alike to neat, expeditious, handwork, machine work, and the use of commercial patterns.

Small-quantity cooking is advisable during this year. The hands of little children are weak and small, and large quantities or large utensils are difficult to handle. Careful measuring, accuracy in following recipes, knowledge of the effect of heat on food materials, and the proper care of cooking utensils may be taught at this time.

The food course should not be rigid. The religious, financial, and social status of the children should be considered, and modification of the lessons made to meet existing conditions. If there is a probability that the girls will leave school before reaching the eighth grade, more cooking with recipes suitable for family use should be introduced in the sixth year, and more attention should be given to the selection of foods and the planning of meals.

All seventh, eighth, and ninth grade food preparation should be with family-quantity recipes and done under conditions similar to those which prevail within the home. When prepared in quantity, food may be disposed of in several ways. The school lunch, the teacher's daily lunch, food sales, the carrying home of the food—all offer means of reducing the cost of the class work and of increasing the value of the instruction. Uniformity in the method of the disposal of the products of classes in different parts of the city is not necessary. It is often well to combine two methods and thus increase the opportunities for varied experience in meal preparation. The work of the food class should never be determined by the needs of the school lunch nor by food sales.

In the seventh grade systematic instruction in personal hygiene and home sanitation should be begun and with these should be taught the management of the laundry and the care of the house. All art instruction should be correlated with the classes in clothing and household furnishing.

In the eighth year of school work the home economics should consist of instruction in foods and food preparation, in textiles and clothing, and in household marketing and accounting. In this grade should be given a simple course in emergency treatments and in the care of the sick.

The ninth grade, the first year of the high school in many places, should be a continuation of the work of the eighth grade and should comprise a survey of the essential facts relating to foods, to clothing, and to home management. This should complete the course in home economics which is required. Elective courses may be offered in all of the remaining years of the high school, and these may be shaped to offer training for wage-paying occupations.

THE TIME REQUIRED.

The preceding plan of home economics instruction makes necessary certain time allowances. For fifth and sixth grade pupils four 45-minute periods per week should be provided. These may be grouped into two quarter-day periods or reduced to a daily period of 35 minutes. In these grades the arrangement may be chosen which is most easily adjusted to the general class program. For the seventh and eighth grades from seven to nine 45-minute periods should be spent in the study of home-making subjects. This work may be arranged to occupy one morning and one afternoon per week and if properly correlated with language, arithmetic, geography, art, and history, will increase interest in these and make possible more rapid progress in all.

Two double periods daily is the time allowance needed for instruction in the ninth grade. This may be divided into two recitation, two study, and six laboratory periods. This work and the food classes of the seventh and eighth grades should be scheduled to come immediately before the lunch period in order that the food products can be utilized during that time.

Owing to the climatic condition existing in Columbia, it will probably be considered advisable to arrange the courses in home economics so that the food-preparation laboratory classes may be taught during November, December, January, February, and March, and the clothing courses be given during the early fall and late spring months. This arrangement necessitates little loss of room use and no disarrangement of schedules for either teacher or pupil if the teachers selected have the ability to teach all lines of home economics instead of special phases of the subject only.

SPECIAL WORK SHOULD BE PROVIDED FOR THE BLOSSOM STREET AND GRANBY SCHOOLS.

In the vicinity of the Blossom Street School there are numerous philanthropic and benevolent agencies which are giving instruction in home-making subjects. That these agencies are encouraging employed girls and women and schoolgirls to increase their efficiency in household affairs is a cause for much thankfulness. But it may well be questioned if any school community is ever justified in depending upon benevolent agencies to do that for which it is responsible.

In the Blossom Street and Granby School communities particularly, opportunities for home-economics instruction should be provided for especially, for the children of mill workers are often older than the other children of their school grade. They have not always been fortunate in their country-school opportunities. They frequently come from homes where all the adult members leave early in the morning and return late at night, too fatigued to give attention to the children's school problems. Most of these children leave school as soon as they are old enough to enter remunerative employment. These conditions should be recognized and special facilities for the work of the character described provided in these localities.

This section of Columbia merits, for example, a special vocational school in which all children of 14 or over, without regard to school ranking, may receive intensive vocational training, home-making courses for the girls and manual arts and agricultural courses for the boys. Such vocational work should occupy one-half of each day's time for each student, and all other school instruction should be correlated with this. In other words, such studies should furnish motives for all the drawing, reading, arithmetic, geography, spelling, composition, and hygiene required of the pupils.

The home economics should closely articulate with the home life of the girls. Food prepared in classes should be used in the homes or at the noon lunches for the pupils in the school. The sewing should emphasize quick and efficient choice of material and of ready-made garments, the repair and remaking of clothing, and the selection, making, and care of household furnishings. The course in housekeeping should include practical instruction in all cleaning processes, including laundering, the keeping of accounts, the intelligent purchasing of household equipment and supplies, and very definite instruction in the elements of sanitation. Care of the sick and of children should likewise receive careful attention.

A well-organized two years' course of the type above described is needed in Columbia. The classes should be small. Women of special ability should be placed in charge, and only those in sympathy with the purpose of this course should be assigned to the teaching of the common-school branches.

A TYPICAL VILLAGE HOUSE, FULLY EQUIPPED, IS NEEDED.

So pressing is the need for intensive courses in home making that Columbia should immediately arrange temporary quarters for instruction in these subjects. A building not greatly dissimilar to the average mill-village house would serve for several years. The sanitation of this house should be perfect and the furnishings of a type attainable by thrifty wage-earning people. Simplicity, sanitation, suitability, and beauty should be emphasized. The house should provide a living room, kitchen, screened porches, bedroom, and bathroom.

The classes assigned should not exceed 24, and for this number two teachers should be detailed to give instruction. The living room and bedroom should be used not only as rooms in which to practice housekeeping but also as sewing rooms and upon occasion as rooms in which to receive visitors. If possible, teachers should be employed who would be willing to live in the house and thus afford more practical instruction to the children in the care of the home.

Furthermore, this neighborhood offers a most excellent opportunity to establish and maintain a course in community cooking. The building now used by the Granby School would afford temporary quarters for a vocational course in cafeteria, restaurant, or community food preparation.

COURSES FOR WOMEN WHO ARE EMPLOYED.

Every employed young woman needs to know some home economics. She should be able to select her own clothing with discrimination and to keep it in repair. This means that she must know fabrics, be trained in standards of good taste, appreciate the need of the clothing suitable to her occupation and income, and must have sufficient dexterity to make her plainer garments and to keep all of her clothing mended. As efficiency in any occupation is largely dependent on the good physical condition of the worker, the young woman employee should know not only clothing but foods, hygiene, and sanitation as well. To secure this knowledge she should rightfully turn to the public schools, and to meet her needs there should be maintained definite, well-organized, and progressive courses of instruction offered at times when it is convenient for her to attend.

At stated intervals special courses in home furnishing and home administration should be offered to young women who have recently married or who anticipate becoming home makers. No wholly satisfactory course can be administered if women of widely diverse experiences and needs are grouped together. Hence, courses for the actual housekeeper should be different from those given to the em-

ployed young woman, and it is probable that teachers with different experiences will be needed to teach these different groups of women.

The most satisfactory course for the women who are actually operating homes of their own is that known as the "short unit" course, each unit of which comprises 8 or 10 lessons. Each unit is independent of those which precede or follow it and is complete in itself, though narrowly limited in the topics treated. For instance, a unit course might be upon the topic of "children's clothing" or "spring millinery," or "quick breads," or "meat cookery."

Teachers with full work during the school day should not be permitted to teach these night or afternoon classes. Not only is the teacher overtaxed and her efficiency reduced, but also the type of teacher most desirable in one position may be far less adapted to meet the requirements of the other.

EQUIPMENT NEEDED FOR HOME ECONOMICS IN THE HIGH SCHOOL.

The reorganization of the high-school home economics course and the prescribing of home economics in the eighth and ninth years for all high-school girls will necessitate the rearrangement of the equipment now in use, the replacement of faulty and worn articles, and the installation of new materials. The present food laboratory, when completely equipped, will furnish opportunity for some of the classes in food preparation, and if rightly arranged may also serve as a place in which the materials for noon lunches can be prepared and from which a cafeteria or plate luncheon can be served. While such an arrangement for service is not ideal, it is economical and under existing conditions not objectionable. If properly maintained, such a meal becomes educative to the consumer as well as to those who assist in its preparation. Men as well as women need to know how to select foods intelligently and to understand relative food values and correct food combinations. These facts may be taught through well-prepared luncheons if a very few minutes are spent in directing the student's attention to such matters. A small kitchen should be arranged in the space now used as a storeroom, with the dining room properly furnished. This would make it possible to serve regular noon meals to the teachers of the building. This arrangement would also provide opportunity for the class, two girls at a time, to cook and serve meals prepared in family quantities.

A new food laboratory will become necessary because of the increase in the number of hours of food work recommended in the new course. It may be considered advantageous to equip the present sewing room for food classes and to change the clothing classes to more attractive rooms on one of the upper floors. The present sewing room is not well heated on cold days, a condition which is of little importance if used for food-preparation classes. A good high-

school sewing course will require a large, well-lighted room for classwork, more machines, better tables and chairs, additional lockers and closets, a fitting room, and suitable arrangements for pressing clothing. It is probable that a second room will be found necessary, especially if it is decided to use the high school as a center for other schools. However, if it is the policy of the school authorities to make the present high school a senior high school, then only one room will be needed for the clothing classes.

A girl's training in home making is not complete when she is able to select, purchase, prepare, and serve suitable foods and make for herself plain, economical, appropriate garments. Her high school should also equip her to select and to control intelligently the environment of her home. In order that the care of rooms may be taught, and also that simple home nursing practice may be given, a room, perhaps the teacher's rest room, should be placed at the service of the home economics department.

EQUIPMENT NEEDED FOR HOME ECONOMICS IN THE GRADE SCHOOLS.

In certain cities of the United States it has been deemed most economical to equip "centers" for home economics teaching and to have the children go from their respective schools to these special rooms for industrial class work. Other cities have equipped home economics rooms in each school building. The latter plan is unquestionably the best. The children are not upon the street between classes, nor are they exposed to disagreeable weather conditions with unnecessary frequency. When there is the necessity of changing the time schedule in one building, no conflicts occur with classes from other buildings, because all instruction is given under the same roof. The objections to this latter plan are, that the expense of equipment is somewhat increased; that in smaller schools the home economics classrooms remain unused during certain hours in the day; and that there are not enough children in one school to occupy the entire time of one home economics teacher; hence it becomes necessary that the teacher travel from one building to another, giving part of her time to each.

The only one of these objections which needs to be considered is that relating to partially unused room space. The interest on duplicated equipment represents so small an item that the objection in regard to this item merits little attention and can not be weighed against the loss of time and the increased hazards which result when children change from building to building. When school buildings are overcrowded, it seems unreasonable to have room space unoccupied for any considerable portion of the time. In all schools of the size of the McMaster, the Logan, and the Taylor School the home economics rooms will be in constant use, but at the Waverley School

and at the Shandon building the enrollment is not sufficient to fill these special rooms all the time. For part of the time, then, these could be used for other purposes.

If transfers from one building to another for home economics instruction be decided upon as most desirable for Columbia's present school condition, then all schedules should be so arranged that these transfers can be made at the usual recess periods, the child remaining one-quarter day or one-half day in home economics work. In many progressive city school systems, other supervised school activities are brought into the building which affords accommodations for home economics. Thus in one-quarter of a day a child may receive instruction in home economics and during another quarter of a day he may spend his time in writing, drawing, gymnasium work, and directed play.

Columbia has available basement rooms in the Logan and McMaster Schools, in which home economics equipment should be installed. It would not be unreasonable to use these two temporarily as centers for the children from the Taylor and the Waverley buildings. When a new building is constructed to meet the needs of the residents of the Waverley district, special provision should be made for accommodating the home economics classes. The Shandon School should have one room so equipped that it may serve for both the food and clothing classes. These children are too far from other schools to be sent to a "center." It is always most desirable to place the food laboratories on the top floor of the building, and in planning new buildings or in rearranging the old ones this fact should be borne in mind and this arrangement brought about if possible.

THE SITUATION IN THE NEGRO SCHOOLS.

Food preparation is given to the colored girls in the eighth, ninth, and tenth grades of the Howard School. Sewing is supposed to be taught to the seventh-grade girls, but because of the number of food-preparation classes it has been found impossible to give sewing this year. The course arranged by the teacher in food preparation was excellent, but its value was limited because of the very small quantities of food materials used. Efforts were made to emphasize the newer food-conservation ideas. Food preparation is taught in one of the basement rooms of the Howard School building. When outside water faucets freeze or are shut off all students at this building come into the cooking-class room for drinking water.

The floor of the laboratory is on the level with a very muddy yard, and conditions surrounding this building as well as all parts of the building itself are bad. The cooking-class room is kept immaculately clean and the walls have been whitewashed by the students. The cooking utensils are of good quality and well kept, and there has

been liberality in the purchase of these and other supplies for this work. No sewing machines have been secured for this school. It is unreasonable to expect these girls to learn to make and to care for their own garments when not supplied with and taught how to use a sewing machine. The students themselves in the food classes were clean, orderly, and well disciplined. They worked quietly and methodically. Where there has been time to teach sewing, the girls have made their cooking uniforms.

NEEDED REORGANIZATION OF HOME ECONOMICS FOR THE NEGROES.

The home-economics courses prepared for the negro girls should be intensely practical and required of all girls of 11 years and older, without regard to their school classifications. Children below the seventh grade in regular work should receive at least 60 minutes of daily instruction in home-making subjects. The first course should consist of work in sewing and housekeeping, especially stressing sanitary household practices and personal hygiene. During the second year of work the course should include the preparation of plain, wholesome food, simple machine sewing, and further instruction in housekeeping. During the third year of the home economics four quarter days or two half days per week should be devoted to the study of home making. At this time cooking with family-sized recipes should be given, together with a study of meal planning and meal service and frequent lessons on the growing of gardens, the care of poultry, and in the economical purchase of foods. The sewing in both the second and the third year should include garments for personal use, for household use, or for the use of other members of the girl's family. Emphasis should be placed on the selection of fabrics and on the repair of worn garments.

Home economics taught during the fourth and fifth years in this course—these grades being usually those of the eighth and ninth school years—should occupy two hours daily. The courses should include food preparation, garment making, lessons in laundering, household accounting, household sanitation, the care of children, and personal hygiene. The death rate among negro children is alarmingly high, and education is the only way to relieve this condition, since much sickness and many deaths are the result of ignorance and superstition.

A course in cooking with vocational aims should be established for colored boys. Such work has been organized at San Antonio, Tex., Los Angeles, Cal., and at other places. At these points boys are prepared for work with the Pullman Co. and for service in hotels and restaurants. Cooks are now needed at camps, on ships, and in cantonments, and the need will continue for a number of years. Were such a training course established, it would be neces-

sary to provide also a restaurant or lunch room in which to dispose of the products and give the necessary training in service.

Special vocational training for adult women is needed among the colored people of Columbia. Such work as that now done at Rock Hill might well be copied. Rock Hill night classes are maintained for maids, and cooks in service, and for women maintaining their own homes. Besides the above course, there should be a vocational home-making course for girls over 14 who manifestly will not continue in school more than one or two years. At least one-half of the school time should be devoted to home making, gardening, and poultrying. All other studies should be correlated with this work. Such a course would lead to more permanent and satisfactory service while wage earning, and later would result in better kept, more healthful, and more contented homes among the negro families in Columbia.

So long as there is a constant transfer from the negro home to the white employer's home, the sanitary and hygienic conditions of the one will be reflected in the health conditions of the other. It is poor economy to leave the negro untrained and in insanitary surroundings, when the child of the white home is cared for and, to a considerable extent, trained by a nurse from a negro cabin. Physically and economically, the retardation of the one race reacts disadvantageously on the conditions of the more fortunate group. Were there no other reasons than these, the negro boys and girls should be trained to become intelligent, diligent, clean, honest, self-supporting men and women, capable of enjoying the beauties of order, cleanliness, and simplicity. To this end, the home economics equipment should be taken out of its present quarters at the Howard School and placed under sanitary conditions.

Home-economics rooms should be provided in every negro school, and a small house and garden spot should be connected with each school in which the seventh, eighth, and ninth grade children are in attendance. These practice houses should not be better than the negro wage earner might aspire to occupy; nor should equipment and furnishing be better than thrifty negro families could afford to copy. The school home-economics furnishing should be adapted to the special needs of the negro children. It should aid in establishing standards for them and should not be so different in quality or in appearance that the school instruction becomes, in the minds of the students, entirely separated from the housekeeping operations within their homes.

SCHOOL LUNCHES.

With the rearranged school schedule, elsewhere suggested, a short noon period in the high school will make necessary the service of a

lunch at the school. Under no circumstances should this lunch privilege be granted to outside concessionaires. Food sold to school children should be furnished at actual cost. It should be of excellent quality and of a type that will furnish proper nutriment in an attractive form. The school lunch becomes an important agency in teaching both boys and girls the intelligent selection and the economical purchase of cooked foods. An increasing number of Americans eat away from home one or more times a day. Usually the man or woman ordering cooked food knows little of its nutritional value; nor is he familiar with correct food combinations. It remains for the school to train in food selection, that adequate nourishment may be secured and that good digestion may be retained.

Because the school lunch affords opportunity to the home-economics pupils to cook in larger quantities without unduly increasing the expenses incident to the maintenance of the department, it is proper that the home-economics teachers have charge over the entire preparation and service of the lunches. It will be necessary to have a hired woman to wash dishes and cook those foods which must be served frequently, but this woman should be directed by a member of the home-economics department in order that the rules for good, healthful food preparation shall not be violated and that the laws of sanitation may be observed.

Columbia now has need of school lunches served at her grade buildings as well. Many of the children of the elementary grades rise before daylight and breakfast with their working fathers or mothers. Many of these breakfasts are served before 6 in the morning and some as early as 5. The parents of these children dine between 12 and 1 o'clock. Cold food which may or may not be reheated is left for the child at his home coming. It is probably true that a large number of the children take an apple, some cookies, or a banana, but under existing conditions such children are not satisfactorily nor sufficiently fed. The stomach of a child is smaller in proportion to its food needs than is that of an adult. It requires more frequent filling if it is to send into the blood enough nutriment to meet all the demands made upon a child's body by work, by play, and by growth. For a child to go from 6 in the morning until after 2 in the afternoon without substantial food is to leave the child listless and inattentive to lessons. Furthermore, the normal appetite is destroyed if the stomach is empty for too long a period.

Underfed children do not develop into strong and efficient children. Dr. Wood figures that 25 per cent of all American children suffer from malnutrition. This condition is not necessarily dependent upon a restricted family income, for ignorance of the food needs of growing children is the commonest cause. Of 21,000 retarded children studied in one school system, it was found that 54.6 per cent

were suffering from malnutrition. Since retardation and repetition of school work become the causes of the increased cost of instruction, it is apparent that children suffering from malnutrition are a drag and an expense upon the whole school organization. School feeding at noon is needed. It should not be established with the idea that it is exclusively for poor children. It should be for all children who wish to buy warm food. The food should be sold at cost. The preparation should be under sanitary conditions and properly controlled and directed. When children are hungry and can not buy, the school should, without humiliation to the child, supply tickets to the lunch, because, as has already been stated, it is an extravagance to retain children in school who are underfed.

SUPERVISION AND INSTRUCTION.

To organize and maintain the type of home-economics instruction described in the foregoing pages, a well-trained, efficient, and enthusiastic corps of teachers will be required. Responsibility and authority for home-economics teaching should be centered in one supervisor or director of home economics. The person chosen will need to be broadly educated and specially trained in home economics. She will need to have had teaching experience and ample knowledge of climatic, economic, and racial conditions as they exist in South Carolina. Not only should she supervise the work in the white schools, but she should also have authority over instruction of similar nature when given in negro schools. This supervisor or director should be paid an adequate salary and recognized as a consultant in the construction of new buildings and as the purchasing agent for her own department and as the one having control of any or of all lunchroom arrangements hereafter provided for in the city schools of Columbia. The supervisor should also be granted the privilege of nominating her subordinates and should not be required to accept any candidate who does not meet her requirements.

PROGRESSIVE DEVELOPMENT OF HOME ECONOMICS.

To inaugurate the entire scheme of home-economics teaching as herein suggested would entail a sudden and burdensome expense upon the public-school authorities; hence the following suggestions are offered.

1. During the first year after the presentation of this report, reorganize the high-school work in home economics, and properly equip the rooms now in use. Suggestions for these needed changes are made elsewhere.

2. Require a new course for all high-school girls.

3. Bring all seventh-grade girls from the Taylor, Logan, McMaster, and Shandon schools to the present high-school laboratories for their classes in home economics.

4. Establish the special vocational home-economics work in the Blossom Street and Granby School community immediately.

5. Establish sewing under the room teacher's instruction in all fifth and sixth grades. Place the supervision of this work under the direction of the supervisor of home economics, increasing the pay of teachers who give this instruction to compensate them for the time which is spent in preparation for teaching and in attending meetings called by the supervisor of home economics.

During the second year of the administration of this new plan centers can be opened, and by the third year the complete adjustment should have been accomplished. There are now two teachers employed to teach home economics in the white schools; when the work is reorganized there will need to be, during the first year, one supervisor, three regular teachers, and one special teacher for work among adult women and employed girls. The number will increase as the work develops in other centers and reaches down into the lower grades. It is not desirable that room teachers continue to teach sewing after the first or second year. They can not be expected to desire this added burden; nor may it be assumed that all will be in sympathy with the movement.

When home economics has become well established and maintained in the schools of Columbia the life of the city will be enriched by many young women who, when assuming the responsibility of administering a home, will bring to their tasks an interest and an understanding of the obligations devolving upon them. They will not be in all ways expert, but they will have that intelligence in matters relating to their homes that will enable them to seek further enlightenment and to make use of the accumulated experiences of women as set forth in the better books treating of home economics.

The time, too, when such courses are inaugurated will come when the school children of Columbia will exhibit a finer degree of physical well being, when merchants and tradesmen will recognize a more discriminating and appreciative purchasing public, and when the employer of woman labor will realize that his employee is a better employee because she is healthier and more capable of securing the maximum of comfort from her use of the contents of her weekly pay envelope. Increased economic pressure will make satisfactory management and expenditures of home incomes more difficult each year. Greater efficiency will be needed by woman. Many heretofore able to command the help of servants will be forced to perform the tasks of their own households and to multiply their own

ability by the use of labor-saving devices. The maintenance of health will become more difficult as the density of population increases and as each household becomes more endangered by the conditions existing in near-by homes. For all of these contingencies must the young woman of the present be made ready if Columbia is to continue to be a rich, contented, beautiful, and healthful city of homes.

SUMMARY.

1. Organize required courses in home economics and mechanical arts for all regular students in grades 5 to 9, inclusive, and for grade 4 in schools where many students are over age.

2. Establish special vocational courses in connection with the Blossom Street School for all children over 14 years of age who will probably leave school without entering the eighth grade.

3. Offer selective courses in home economics, agriculture, and manual arts to advanced high-school students.

4. Maintain classes in home making for actual home makers and for employed girls and women.

5. Adjust the problems used in the lessons to meet the social, financial, or religious status of students.

6. Have usable articles made in all sewing classes and family-sized recipes used in all classes above the sixth grade.

7. Serve at school luncheons or teachers' lunches or sell the food which is cooked by the classes.

8. Maintain a school lunch at the high school, the Blossom Street School, and when need arises at other schools in the city.

9. Place the responsibility for the school lunch in the hands of the supervisor of home economics.

10. Improve and enlarge the equipment and room space in the high school now given to home economics.

11. Equip "centers" at certain grade buildings, but plan to have ultimately a full equipment in each school.

12. In the Blossom Street School district equip a village house as a practice house for home-making instruction.

13. Limit the number of students in classes and classify carefully.

14. Require home economics of all negro girls of 11 years of age and above and make the courses intensely practical, seeking especially to establish standards that shall react beneficially upon the homes of the children.

15. Suitable rooms in every negro school in which are to be found the seventh, eighth, or ninth grades should be provided and fully equipped.

16. Establish a department of home economics, including all instruction in home-making subjects, in all schools.

17. Employ one supervisor for all home economics teaching and an adequate, well-prepared, and well-paid teaching corps.

18. Encourage study and advanced work among these teachers.

19. Since all changes can not be made in one year, it is suggested that room teachers instruct the fifth and sixth grade children in sewing for the first year and the fifth-grade children during the second year, and by the third year have the home economics corps increased to a number sufficient to give all necessary instruction. The same arrangement should also be worked out for the mechanic arts.

20. Because the expense of inaugurating all these changes must be considered, it is further suggested that needed improvements be first made at the high school and at the Blossom Street School, to be followed by improvements at the Logan and McMaster Schools and later at all the other schools of the city.

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V.—INSUFFICIENT MAINTENANCE HAS RENDERED THE SUPERVISION INADEQUATE.

THE SUPERVISORIAL STAFF.

In any enterprise where results depend upon collective effort, as in a public-school system, confusion, loss of time and of effort, and general wastage on all sides can be avoided only by a very careful coordination of the work of every individual in the corps. Efficiency can be obtained only through teamwork exercised in every part of the many-sided activities of the system. And teamwork can be secured in no other way than through the personal supervision of a leader or leaders who endeavor to unify the work of all in order that a definite aim may be reached or an adopted plan carried into effect. In a school system the responsibility falls directly upon the superintendent and his corps of supervisors and assistants expressly selected for their ability as leaders and for their knowledge of details. In most cities the size of Columbia there is a supervisor of the primary grades; either a supervisor of intermediate grades or this work is done by the principals of the several schools; a supervisor of industrial work for the system throughout; a supervisor of music throughout; a supervisor of penmanship throughout; one for drawing and art throughout; and then heads of high-school departments, who are looked upon as responsible, in the high-school corps, for the planning and teaching of their respective subjects and whose ability and responsibility are recognized in the salary schedule.

These supervisors, acting with the superintendent as their leader and with the principals in the several schools, constitute the supervisory body whose duty it is to lay out plans in discussion with the teachers, and through cooperating with the latter gradually bring about a well-knit together and thoroughly coordinated school system which shall increasingly secure higher standards of efficiency in their respective departments.

In respect to such a supervisorial staff Columbia has been unfortunate, for it has been impossible for the board of education to provide the necessary funds. A supervisor of all of the grades and a supervisor of music is as far as the board has gone in this important direction. So these two, with the superintendent, give the only supervision which the teachers obtain as the schools are now organized.

It is clearly impossible for these three to provide the supervision which the system needs and which the preceding paragraph suggests.

The burden of putting into execution the building program, covering the past 12 years, has fallen upon the superintendent. He has studied most thoroughly the problem of the modern school building; he has planned the structures, supervised the architects, and watched the progress of each building in every detail. Besides this, as secretary of the board, and its treasurer as well, he has verified every bill of expenditure and drawn every check which has been issued. He has handled all the correspondence involved and written all the letters which have been sent out. He has kept an itemized record of all receipts and of all expenditures reaching back over his period of incumbency, and the records are models of accuracy and clearness. All this mass of necessary detail he has attended to personally; for not until three years ago was the board able to provide him with an office assistant. A heavy task has been his, and the tangible results expressed in modern buildings of excellent appearance are a tribute to his energy, good judgment, and painstaking effort.

THE PRINCIPALS DO NOT SUPERVISE.

Obviously, it has been impossible for the superintendent during this period of building activity to give his attention to the professional side of the work of the schools except in the more general features. He has not had the time personally to supply that coordinating leadership in the purely instructional and educational side of the school's activities which good teamwork in a modern school system requires. Ordinarily this need could be supplied to a degree, though not wholly, by holding the principals responsible in their several buildings for the quality of the teaching therein and expecting them to supply in their own teaching corps the leadership needed. But here, again, funds have been so inadequate that the principals of even the largest buildings have had to teach full time, consequently their work as supervisors has been limited to the care of the building and grounds and to matters of disciplinary character. Very recently some relief has been provided, for the principals of the three largest elementary schools and the principal of the high school have been granted the following free time through the employment of substitute teachers for part time:

Principal of the McMaster School	From 9 to 11.30 a. m.
Principal of the Logan School	Full time.
Principal of the Taylor School	From 9 to 11.30 a. m.
Principal of the high school	Full time.

It should be added, however, that the rules and regulations of the board which define specifically the duties of principals have not yet

been amended to give them any authority in their schools in matters of an instructional nature, so that as yet no use has been made of the principals in this connection.

THE DUTIES OF THE ELEMENTARY SCHOOL SUPERVISOR.

In practice, then, the only detailed supervision of professional character which the teachers are getting is that afforded by the elementary school supervisor and by the supervisor of music, whose time is given to her subject alone. There are 71 teachers of elementary grade in the white schools. Even though the supervisor should spend her entire time in schoolroom visitation, it is clear that she could give but a short period to each teacher at infrequent intervals only. As it is, however, in addition to her supervisorial duties, she has charge of issuing the supplies to the several schools. This, together with necessary office work, requires considerable time and attention—about one-fifth of her time, it is estimated—and lessens by so much the all too limited opportunity she otherwise would have. Much can be and is being done toward unifying the work through the grade meetings which the supervisor holds (the schedule calls for a monthly meeting with each grade) and through the bimonthly progress reports which each teacher is required to make in written form. However, the suggestions brought out in the meetings and the proposals elicited by the reports should be closely and personally followed up in the several classrooms if coordinated results of a high order are to be secured. As the matter now stands, the supervisor can spend but one day twice per month in each building in this follow-up work. Obviously, during a single five-hour teaching session she can observe the work of but few individuals; so in the larger schools, as it works out practically, there are many teachers whom the supervisor visits infrequently and but for a few minutes at a time only.

Other elements of serious consequence making for disintegration are the teachers who enter the department in numbers each year unfamiliar with the work of the system and the corps of substitute teachers, which is shifting and impermanent.

The new teachers should be taken at the beginning of their period of service by the supervisor for special training and instruction in the important features of the system; and then, for a time, at least, their work in the classroom should be very closely followed, in order that as quickly as possible they may be made able to contribute their part to good teamwork. In Columbia these new teachers have, to a degree, to find their places as best they can, for it is impossible for the one supervisor, try as hard as she may, to give them as much special attention as they need.

THE PROBLEM OF SUBSTITUTE TEACHERS.

A more serious problem than that of the "new" teacher, however, is found in the character of the corps of teachers who are called on from time to time to substitute for those teachers who, for any reason, are kept away from their classes. In many instances the absence of the regular teacher is but for a day or two; again, in instances, it may be for a week or indeed for several weeks. Again, a given substitute may be needed one day in a first grade, the next day she may be sent to a sixth grade, and the third day to some other grade. Then, too, one day she is sent to teach a class perhaps notoriously difficult to interest and control, while the next day her lines may fall in a more pleasant place. Furthermore, in most instances the need is not known until just a few minutes before the day's session begins, scarce affording time, frequently, for the substitute to reach the post assigned her. The consequence is that she has had no time to make that special preparation for the day's work which the regular teacher always makes if she is in earnest and which is doubly necessary for a substitute if she is to succeed in doing creditable work.

Clearly, then, the most difficult position in the entire teaching corps of any city is that of the substitute teacher. She needs versatility, adaptability, intimate knowledge of the entire range of school work, poise, disciplinary ability, and all the other qualities of a good teacher to an even greater degree than that required of the regular teacher, who has the same group of children for a year or a term at least, and becomes familiar thereby with the idiosyncrasies of each individual. In practice, most school systems employ as substitute teachers almost all who come along—green girls, broken-down old ladies, impecunious wives—anybody, in fact, who can be gotten hold of quickly when needed, and no questions are asked—not many, anyway.

If sufficient remuneration is paid to make the work an inducement, usually a few people of ability can be gotten together who with sufficient training and close supervision can be brought to a point where at least it is better to assign them to a class than to dismiss the children, but a better plan is that now adopted in a few progressive and far-sighted systems.

Recognizing that such work demands teaching skill of the highest order, the school boards select a few of the very best teachers of the regular corps, the number depending upon the size of the system, relieve them entirely of assignment to a given class and thereby secure a "flying corps" to be quickly shifted from point to point as the emergency arises. Such teachers, instead of being paid less than regular teachers, are paid considerably more in recognition of their

superior ability and the difficulty of the work. As they are employed on full time, when no substituting is called for, they are sent into various schools to give observation lessons for weak teachers or for teachers who are new to the work and need the help which the supervisors have no time to give. Again, they are assigned to a given grade for two or three days, giving the regular teacher a much-needed opportunity of visiting other classes in her own or in neighboring cities. Such teachers become in reality the teaching assistants of the supervisor, and in those cities which have tried the plan are considered indispensable adjuncts of the supervisorial staff.

In Columbia, however, the funds are not sufficient to secure adequate supervision in any way. In consequence, one observes a lack of coordination of effort and of plan in the several schools of the system which seriously lessens the efficiency of the work as a whole.

The result which comes from lack of proper coordination is well illustrated by the way the plan of pupil promotion operates; by the teaching activities of the classrooms; and by the achievement of the pupils as shown by certain standard educational measurement tests which were given. These three phases of the work are of sufficient consequence to justify a detailed discussion.

1. THE PLAN OF PUPIL PROMOTION.

The plan of promotion which was adopted when the school system of Columbia was organized in 1883 has been retained without essential change. As described in the superintendent's First Annual Report, the plan called for annual promotions, to be based on a five-days' written examination to be held during the week immediately preceding the last week of the school year, followed by a public oral examination on two days of the final week. In addition, bimonthly written examinations, on prescribed days, throughout the year were required of all grades above the second. The results of the monthly and yearly examinations were to be averaged separately, each counting half in determining the pupil's final score, which was registered on a scale of 100, with 65 designated as the passing average and 55 a minimum for any given subject. In 1913–14 came semiannual promotions throughout, and in 1915 promotion by subject was introduced in the high school. About the same time the report cards of the elementary grades were changed whereby grades in term of per cents were expressed as letters except in the high school, where the percentile system of scholarship grading is still employed. However, as it was at the beginning, the essence of the plan is still the formal written examination at the end of each term, coupled with tests held at intervals throughout.

A summary of the results obtained under the operation of the plan, in respect to the promotion and failure of pupils in the elementary grades for the term closing June, 1917, follows:

Promotions and failures distributed by grades and schools. White children, June, 1917.

FIRST GRADE.

Schools.	Total number of pupils remaining to end of term.	Promoted.		Promoted on trial.		Failed.	
		Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Logan School	109	67	61.5	17	15.6	25	22.9
McMaster	69	60	86.9	4	5.7	5	7.3
Taylor	71	55	77.4	8	11.3	8	11.3
Shandon	28	20	71.4	6	21.4	2	7.2
Waverley	31	21	67.7	7	22.6	3	9.7
Blossom Street	59	35	59.3	18	30.5	6	10.2
Granby	33	27	81.8	1	3.0	5	15.2
Total	400	285	71.2	61	15.3	54	13.5

SECOND GRADE.

Logan	140	101	72.2	23	16.4	16	11.4
McMaster	78	55	70.5	16	20.5	7	9.0
Taylor	72	53	73.6	7	9.7	12	16.7
Shandon	42	31	73.8	7	16.6	4	9.6
Waverley	27	25	92.6	2	7.4	0	.0
Blossom Street	35	22	62.9	8	22.9	5	14.2
Granby	43	37	86.0	4	9.3	2	4.7
Total	437	324	74.2	67	15.3	46	10.5

THIRD GRADE.

Logan	109	90	82.6	10	9.2	9	8.2
McMaster	84	63	75.0	9	10.7	12	14.3
Taylor	86	61	70.9	20	23.3	5	5.8
Shandon	45	36	80.0	5	11.1	4	8.9
Waverley	33	21	63.6	8	24.2	4	12.2
Blossom Street	42	22	52.4	9	21.4	11	26.2
Granby	11	10	90.9	0	.0	1	9.1
Total	410	303	73.9	61	14.9	46	11.2

FOURTH GRADE.

Logan	157	131	83.4	13	8.3	13	8.3
McMaster	85	64	75.3	12	14.1	9	10.6
Taylor	74	57	77.0	11	14.9	6	8.1
Shandon	39	28	71.8	9	23.0	2	5.2
Waverley	34	29	85.3	4	11.7	1	3.0
Blossom Street	51	38	74.5	6	11.8	7	13.1
Total	440	347	78.8	55	12.5	38	8.7

FIFTH GRADE.

Logan	74	66	89.3	5	6.7	3	4.0
McMaster	79	67	84.8	11	14.0	1	1.2
Taylor	75	47	62.6	18	24.0	10	13.4
Shandon	25	20	80.0	1	4.0	4	16.0
Waverley	11	11	100.0	0	.0	0	.0
Blossom Street	17	12	70.6	2	11.7	3	17.7
Total	281	223	79.3	37	13.2	21	7.5

Promotions and failures distributed by grades and schools. White children, June, 1917—Continued.

SIXTH GRADE.

Schools.	Total number of pupils remaining to end of term.	Promoted.		Promoted on trial.		Failed.	
		Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Logan	56	36	64.3	11	19.7	9	16.0
McMaster	67	47	70.1	13	19.4	7	10.5
Taylor	65	37	57.0	9	13.8	19	29.2
Shandon	25	23	92.0	0	.0	2	8.0
Waverley	14	14	100.0	0	.0	0	.0
Blossom Street	7	7	100.0	0	.0	0	.0
Total	234	164	70.0	33	14.1	37	15.9

SEVENTH GRADE.

Logan	77	50	64.9	15	19.5	12	15.6
McMaster	72	43	59.7	21	29.1	8	11.2
Taylor	29	25	86.2	0	.0	4	13.8
Shandon	18	13	72.2	4	22.3	1	5.5
Waverley	26	20	77.0	4	15.3	2	7.7
Blossom Street	.....	.....	.....	.....	.....	.....	.....
Total	222	151	68	44	20.0	27	12.0

Promotions and failures distributed by grades and schools. Negro children. June, 1917.

FIRST GRADE.

	Total number of pupils.	Promoted.		Promoted on trial.		Failed.	
		Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Booker T. Washington	248	207	83.4	7	2.9	34	13.7
Howard	285	198	69.5	29	10.2	58	20.3
Total	533	405	75.9	36	6.8	92	17.3

SECOND GRADE.

Booker T. Washington	122	95	77.9	12	10.0	15	12.1
Howard	122	97	79.6	4	3.3	21	17.1
Total	244	192	78.7	16	6.5	36	14.8

THIRD GRADE.

Booker T. Washington	81	62	76.5	3	3.7	16	19.8
Howard	117	84	71.8	10	8.6	23	19.6
Total	198	146	73.7	13	6.7	39	19.6

FOURTH GRADE.

Booker T. Washington	76	59	77.6	3	3.9	14	18.5
Howard	103	91	88.4	8	7.7	4	3.9
Total	179	150	83.9	11	6.1	18	10.0

Promotions and failures distributed by grades and schools. Negro children, June, 1917—Continued.

FIFTH GRADE.

	Total number of pupils.	Promoted.		Promoted on trial.		Failed.	
		Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Booker T. Washington	43	33	76.7	1	2.4	9	20.9
Howard	62	51	82.3	5	8.0	6	9.7
Total	105	84	80.0	6	5.7	15	14.3

SIXTH GRADE.

Booker T. Washington	32	18	56.3	5	15.6	9	28.1
Howard	66	58	88.0	3	4.5	5	7.5
Total	98	76	77.6	8	8.1	14	14.3

SEVENTH GRADE.

Booker T. Washington	18	13	72.3	1	5.5	4	22.2
Howard	54	50	92.6	0	0	4	7.4
Total	72	63	87.5	1	1.4	8	11.1

NO UNIFORM PROMOTION BASIS IN EVIDENCE.

The striking thing to be observed in these summaries of the proportion falling into the three groups, "Promoted," "Promoted on trial," and "Failed," is the complete lack of the evidence of any standardized basis of promotion and failure within the limits of a given grade considered for all schools or within all the grades of a single school. Some schools give a clear promotion to 87 per cent of their first-grade pupils, while others promote only 60 per cent; in second grades the promotions range from 62.9 per cent in the Blossom Street School to 92.6 per cent in the Waverley; in third grades the range of promotion is from 52.4 per cent in the Blossom Street School to 90 per cent in the Granby; in the fourth grades the variation among schools is not so great, the range being from 71.8 per cent in the Shandon to 85.3 per cent in the Waverley; in the fifth grades the Taylor School promotes 62.6 per cent, while the Waverley promotes 100 per cent; in the sixth grades the range of variation is from 57 per cent in the Taylor to 100 per cent in both the Blossom Street and Waverley; while in the seventh grades we find the lowest percentage of clear promotions to be at the McMaster, with 59.7 per cent, while the highest is at the Taylor, with 86.2 per cent.

Again, taking the variations of standard within each school we find the same lack of uniformity. In the Logan School the range in clear promotions is from 61.5 per cent in the first grades to 89.3 per cent in the fifth grades; in the McMaster the range is from 59.7 per cent in the seventh grade to 86.9 per cent in the first grades; in

the Taylor it is from 57 per cent in the sixth grades to 86.2 per cent in the seventh; in the Shandon the lowest is 71.4 per cent in the first grade, and the highest 92 per cent in the sixth grade; with the Waverley the third grade is the lowest, 63.6 per cent, while 100 per cent were promoted in both the fifth and sixth grades; the Blossom Street School promoted 52.4 per cent of the third grade and 100 per cent of the sixth grade; while in the Granby School, the mill school where one would expect a large percentage of retardation in comparison with other schools, the range of promotion was between 81.8 per cent in the first grades and 90.9 per cent in the third grade. Were the records of individual classes taken instead of the grades as wholes the variations would have been even greater.

In the negro schools the same lack of any apparent norm of promotion is observable. The lowest percentage of straight promotion is 56.3 per cent, in the sixth grade of the Booker T. Washington School, while the highest is 92.6 per cent, in the seventh grade of the Howard School. A good illustration of the lack of uniform standards of promotion is found in the percentage of failures in the fourth, fifth, sixth, and seventh grades of these negro schools. In the fourth grade of the Booker T. Washington School failures were 18.5 per cent of the pupils, while in the Howard School the failures in the same grade were but 3.9 per cent of those remaining to the end of the term. In the fifth grade the failures were 20.9 per cent in the one school and 9.7 per cent in the other. In the sixth grade the percentages are 28.1 and 7.5, respectively, while in the seventh grade 22.2 per cent failed in the Booker T. Washington and but 7.4 per cent in the Howard.

It must be remembered, moreover, that these percentages are based on the number of pupils who, having enrolled in the school, remained in attendance throughout the entire term. How many became discouraged with their work during the term and dropped out on that account is not known. That the total loss during the term, from whatever cause, was very heavy, nearly one-third of the enrollment, the following table, compiled from the records of the negro schools, will show:

Loss in the negro schools during one term.

Grades and schools.	Total enrollment.			Withdrawals.			Per cent loss.
	Boys.	Girls.	Total.	Boys.	Girls.	Total.	
First grade:							
Booker T. Washington	190	210	400	74	78	152	38.0
Howard	200	187	387	52	50	102	26.3
Second grade:							
Booker T. Washington	80	93	173	27	24	51	30.0
Howard	94	103	197	31	44	75	38.0
Third grade:							
Booker T. Washington	46	86	132	20	31	51	38.6
Howard	63	95	158	23	18	41	26.0

Loss in the negro schools during one term—Continued.

Grades and schools.	Total enrollment.			Withdrawals.			Per cent loss.
	Boys.	Girls.	Total.	Boys.	Girls.	Total.	
Fourth grade:							
Booker T. Washington	30	79	109	11	22	33	30.2
Howard	50	83	133	9	21	30	22.5
Fifth grade:							
Booker T. Washington	22	37	59	6	10	16	27.1
Howard	36	46	82	8	12	20	24.4
Sixth grade:							
Booker T. Washington	14	26	40	4	4	8	20.0
Howard	24	56	80	7	7	14	17.7
Seventh grade:							
Booker T. Washington	8	19	27	2	7	9	33.3
Howard	19	54	73	8	11	19	26.1
Total	876	1,174	2,050	282	339	621	30.3

THE SITUATION IN THE HIGH SCHOOL.

The lack of uniformity of grading, apparent in the elementary schools, is no less in evidence in the high schools, where the percentage of failures runs higher than in the grades. A study of the marks given for the term ending June, 1917, to a class of the first two years (eighth and ninth grades) of the high school and for the four subjects which most of the pupils were taking was made. There were so few pupils enrolled in the two upper years, and they were scattered among so many subjects, that it seemed unprofitable to carry the study further, although, doubtless, the showing would have been better. The following table shows the proportion who "passed" and the proportion who "failed" in algebra, Latin, English, and history:

Promotions and failures in four high-school subjects.

Classes.	Algebra.			Latin.			English.			History.		
	Total number pupils.	Total promoted.	Per cent promoted.	Total number pupils.	Total promoted.	Per cent promoted.	Total number pupils.	Total promoted.	Per cent promoted.	Total number pupils.	Total promoted.	Per cent promoted.
1A1	32	25	77.1	27	24	88.8	33	21	63.6	30	22	73.3
1A2	29	24	82.8	28	24	85.7	28	18	64.3	27	22	81.5
1A3	.....	.....	.....	.....	.....	.....	30	20	66.6	30	3	10.0
1B1	33	24	72.2	29	21	72.4	34	25	73.5	34	29	85.3
1B2	35	27	77.1	32	28	87.5	36	30	83.3	36	32	88.8
1B3	.....	.....	.....	.....	.....	.....	31	22	70.9	31	21	70.0
2A1	33	20	60.6	27	12	44.4	33	24	72.7	33	24	72.7
2A2	30	25	83.3	26	17	65.4	32	26	81.2	31	24	77.4
2A3	.....	.....	.....	.....	.....	.....	14	10	71.4	.....	.....	.....
2B1	24	23	95.8	24	15	62.5	26	21	80.7	27	19	70.4
2B2	.....	.....	.....	.....	.....	.....	7	7	100.0	.....	.....	.....
Total	216	168	77.7	193	141	73.0	304	224	73.6	279	196	70.2
Median of classes	.....	.....	77.1	.....	.....	72.4	.....	.....	72.7	.....	.....	73.3

That is to say, in algebra the range of promotions among the classes considered as units was from 60.6 per cent in 2A1 to 95.8 per cent in 2B1, with a median of 77.1 per cent in 1B2. In Latin the

lowest percentage of promotion was 44.4 per cent in 2A1, and the highest 88.8 per cent in 1A1, with a median of 72.4 per cent in 1B1. In English the variation was between 63.6 per cent in the 1A1 to 100 per cent in 2B2, with a median of 72.7 per cent in the 2A1. In history, in one class, the 1A3, only 10 per cent were promoted, while in the 1B2, 88.8 per cent were promoted. The median class was the 1A1, with 73.3 per cent passing.

If the preceding table be carelessly read, it might be inferred that from 70.2 per cent to 77.7 per cent of the pupils enrolled in the classes of the first two years of the high-school course are promoted without failure, but a moment's thought will make clear that that would be true only in the event that the same pupil fails in all four subjects. In fact, one pupil may fail in algebra and pass in the other subjects, and another pupil may fail in Latin, and so on. Another table, then, is needed to show just what the situation is as it relates to the individuals of the classes and that is a table showing how many in each class failed in one or more subjects in comparison with the total class enrollment. This follows, the data for which were taken direct from the teachers' registers:

Percentage of failures in four high-school subjects.

Classes.	Total number of pupils receiving marks in the four subjects.	Number failing in one or more subjects.	Percentage failing in one or more subjects.	Percentage passing in all subjects.
1A1	33	15	45.4	54.6
1A2	29	12	41.4	58.6
1A3	30	28	93.3	6.7
1B1	34	16	47.0	53.0
1B2	36	11	30.6	69.4
1B3	31	12	38.7	61.3
2A1	33	28	84.8	15.2
2A2	32	17	53.1	46.9
2A3	14	4	28.5	71.5
2B1	27	14	51.8	48.2
Total	299	157	52.5	47.5

Of the total of 157 who failed in one or more subjects, 3 failed in all four; 19 failed in three each; 65 failed in two each; while the remaining 70 failed in one of the four subjects. This discloses a startling situation, for the tabulation shows that more than half (52.5 per cent, to be exact) of those remaining throughout the term in the first two years of the high-school course are failing in one or more of their studies and this does not take into account those who became discouraged and quit. This is rendered still more serious by the record in two of the classes, the 1A3 and the 2A1 (see the preceding table). In the first of these, a class comprising 16 boys and 14 girls, all the girls failed in at least one subject, while only 2 of the

boys escaped. That is to say, only 2 out of the total of 30 did work sufficiently creditable to pass them in all four subjects. In the 2A1 the situation is a little better, but not much. This class comprised 22 boys and 11 girls who received marks at the end of the term. All failed in at least one subject except 1 girl and 4 boys. The girl missed failing in one of her subjects by one credit only; while had 3 of the 4 boys had five credits less each, they, too, would have failed. There was just one pupil in the class whose term marks did not fall below 70 in any one subject.

In attempting to account for this surprising situation the explanation, doubtless, which first occurs to one as a possibility is that of irregularity of attendance. It stands to reason that a pupil who, for whatever reason, is absent a great deal from his recitations can not expect to fare as well in terms of school credits as one who is always in his place, and therefore who gets all the benefit of the course of instruction. Indeed, it is clear that too great a degree of irregularity in attendance, varying with the individual pupil, will naturally end in a grade of work so poor in quality as to justify the teacher in asking him to repeat the course during the following term. In seeking a reason, then, for the undue proportion of failure in the high school, the facts regarding the attendance of those who failed were examined. The results of this study of the relation of failure to attendance are given in the table which follows:

Relation of failures in algebra, English, history, and Latin to irregular attendance, high school, June, 1917.

Classes.	Number of pupils receiving marks.	Number failing in one or more of four subjects.	Class average for pupils—days absent during term of 88 days.	Attendance record of those failing.		
				Number having no absences.	Number having fewer than class average.	Number having more than class average.
1A1	33	15	6.2	1	10	4
1A2	29	12	9.3	2	7	3
1A3	30	28	8.5	4	21	3
1B1	34	16	4.2	3	10	3
1B2	36	11	5.5	4	2	5
1B3	31	12	9.9	4	4	4
2A1	33	28	6.5	8	11	9
2A2	32	17	7.2	7	8	2
2A3	14	4	5.6	1	1	2
2B1	27	14	7.0	3	11	0
Total	299	157	6.9	37	85	35

These facts were come at in this way: The total number of days' attendance during the term for a given class was divided by the number in the class who remained in school throughout the term. This gave the average number of days attended by each member of the class. The difference between this average and 88, the number

of days school was in session during the term ending June, 1917, was taken. This gave the average number of days each member of the class was absent. (See table, column No. 3.) Then the attendance record of each pupil who failed was compared with the absence average for his class and the results distributed into three groups: (1) The number having no absences, (2) the number having fewer absences than the average for his class, (3) the number having more absences than the class average. The last three columns of the preceding table show these distributions for the classes considered. The totals show that, of the 157 failures, 37 of them had no absences against them at all; 122 had fewer absences than the average of their respective classes; while only 35, less than a fourth, had an absence record which exceeded that of the average of their several classes.

Obviously, then, for 77.7 per cent of this group of failures, whatever may be said of the remainder, their scholarship record can not be laid, justly, at the door of irregularity of attendance. The explanation must be sought elsewhere and can be found, it is believed, no where but in the lack of teamwork among the teachers leading to greater unanimity as to a reasonable standard to which pupils should be held and by which they are judged, for it is inconceivable, of course, that there is any such variation in the actual ability of the children of Columbia as is disclosed by the foregoing study of promotion records.

THE INACCURACY OF TEACHERS' MARKS.

Children are pretty much the same the world over in respect to their reaction to school instruction. That is to say, the average of a group in one part of the country will measure up pretty close to the average of a group of the same age in any other part of the country. The variation comes, not among the children, but among the teachers, in their estimates of what the pupils have accomplished. A number of studies have been made during the last few years to determine the accuracy and reliability of the marks which teachers give to pupils. An interesting summary of several of these investigations is to be found in Monroe, DeVoss, and Kelly: "Educational Test and Measurements." Houghton Mifflin Co., 1917.

Carter,[1] for example, in 1911, took the marks of the eighth-grade pupils who had entered high school from three elementary schools and compared them with the marks received in the high school. He reasoned that, if the marks were an accurate rating of the pupils' ability, in general the same relative position obtained in the elementary schools would be maintained in the high school. He found, however, that there was a complete reversal from what one would

[1] Carter, R. E. Correlation of Elementary Schools and High Schools. In Elementary School Teacher, vol. 12, pp. 109–118.

expect, for the pupils coming in from the school which gave the lowest marks, outstripped the others in maintaining or increasing their original rank.

Kelly,[1] in 1913, made a similar study of the marks of sixth-grade pupils coming into a common departmental school for seventh-grade work from four ward schools. To quote his conclusion:

> This means that for work which the teacher in school C (one of the ward schools) would give a mark of "G" (good) in language, penmanship, or history, the teacher in school D (another ward school) would give less than a mark of "F" (fair).

Starch and Elliott,[2] to mention but one other of many investigations of the accuracy of teachers' markings, made a facsimile reproduction of an examination paper handed in by a pupil in plane geometry and sent a copy to the teachers of geometry of all the high schools included in the North Central Association of Colleges and Secondary Schools, requesting that they mark the paper on a scale of 100 per cent. One hundred and sixteen teachers complied, with the following results: Two of the ratings were above 90; while one was below 30; 20 were 80 or above; while 20 others were below 60; 47 teachers gave a passing mark or above, while 69 teachers gave a mark which would have failed the writer of the paper.

These and other investigations of similar character point inevitably to the conclusion that teachers' marks, as determined in most schools, are inaccurate and unreliable records of the performance, or ability, or accomplishment of pupils, and that the faith which both pupils and teachers have placed in traditional systems of marking is a blind, unreasoning one. Is a teacher rating merely the performance of a pupil in the particular examination set? Or does she take into account the pupil's ability? Or again is it his accomplishment extended over a period of considerable time that she is rating? Others, again, may have in mind the pupil's effort. Still others may try to show the degree of improvement the pupil has made within a given period. The question: "What do we mark?" was put by one superintendent to his teachers,[3] and the following were some of the answers he got: "Improvement," "ability," "serious purpose," "moral qualities," "interest in work," "accomplishment," "accuracy, neatness, and promptness," "acquisition of knowledge." Again, what is the 100 per cent ideal which the teacher has in thought? What would the zero point represent on a percentile scale? "Does 50 per cent," to quote a writer on school problems, "mean half knowing a

[1] Kelly, F. J. Teachers' Marks. Teachers' College Contributions to Education, No. 66, p. 7.

[2] Starch and Elliott. Reliability of Grading High-School Work. Sch. Rev., vols. 20, 21.

[3] Camp, Frederick S. Marks: An administrative Problem. School Review, December, 1917.

lesson, knowing half a lesson, knowing half as much as the teacher knows, half as much as the text, half what the pupil ought to know, or half what he could know?" The problem is not simplified because letters, meaningless in themselves, are adopted to register a pupil's rank, for usually these are merely symbols into which the percentile scale is translated.

The difficulty is at once apparent. The teacher has but a hazy and ill-defined theoretical standard of excellence in mind by which she judges as best she may the standing of her pupils. It is not an accurate basis of measurement, for the reason that it is shifting and variable in her own mind and, furthermore, because she is trying to use one standard by which to express a judgment on a number of qualities which she wishes to take into account. As the standard of one teacher will be different, naturally, from that held by another, as long as the marking system is as it is, no other result can be expected than one in which there is a wide variation in expressed judgment. When, furthermore, there is a lack of coordination of work and of standards of judging the results, which invariably ensues if there be inadequate supervision, this variation in the percentage of pupils promoted in different classes will be greatly accentuated. The situation, then, in Columbia, bad as it is, in respect to lack of uniformity of standard, is not unusual. It will always obtain so long as the present marking system is retained and so long as teachers are not more closely supervised.

A PLAN BASED ON THE NORMAL DISTRIBUTION OF ABILITY.

The whole problem, however, would be greatly simplified were the teachers to discard the theoretical standard of excellence which they severally hold and frankly recognize that in relation to ability or effort or accomplishment, or, for that matter, any other quality they care to consider, their school class is a normal group of pupils, comprising a few individuals of marked proficiency, many of average attainments, and a few who are mediocre. Or, putting the fact another way: In every group not artificially selected there is a normal distribution with respect to any trait or qualification. The majority of the class will be found clustering pretty closely about the average or mean position, while the further above or below this mean one goes, the fewer will be the individuals found.

For example, many careful studies have shown that in any class there are a few who are excellent as compared with the remainder of the class; about twice as many are very good; 40 to 50 per cent are somewhere around the average; about as many are poor as are good; and about as many are very poor as are excellent. It is very difficult to measure the precise ability of a pupil; there is no known precise standard to use in measuring it, but it is not difficult for a teacher to

pick out from 3 to 10 per cent of her class who are excellent and to place the others in four or five groups with respect to these. Furthermore, she does not need a week of formal examinations at the end of the term, coupled with mid-term examinations, to make such a distribution. In short, as Bennett[1] says, "We can not presume to state how much ability a pupil has nor how valuable his work has been, but we can state his relative standing in the class with reasonable accuracy."

Finkelstein,[2] in his study of marks given at Cornell University, recommends a five-division marking system based on the following distribution of the individuals of a given class: Three per cent, excellent; 21 per cent, superior; 45 per cent, medium; 19 per cent, inferior; 12 per cent, very poor. Of this last group approximately 11 per cent should be conditioned and 1 per cent failed, he asserts. He holds that this distribution conforms to theoretical requirements and that it expresses fairly well the practice of Cornell University as shown by the tabulation of more than 20,000 marks extending over a period of three years and taken from 163 courses. His recommendations are made primarily for the high school and the university.

Other investigators have reached somewhat different conclusions regarding the distribution. Some of these are:

	A.	B.	C.	D.	E.
	Per cent.	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*
Cattell	10	20	40	20	10
Smith	10	15	50	15	10
Ruediger	4	24	44	24	4
Meyer	4	21	50	18	7
Foster	3	22	50	22	3
Dearborn	2	23	50	23	2
Gray	7	20	42	21	7
Cajori	7	24	38	24	7
Starch:					
Elementary	10	39	39	8	4
Advanced	14	44	33	6.5	2.5

These differences of opinion easily fall within the range of variation which a system to be flexible should permit. Such a scale could be stated as follows: Of the total number of marks given, let the "A's" comprise from 3 to 10 per cent; the "B's" from 15 to 22 per cent; the "C's" from 40 to 50 per cent; the "D's" from 15 to 22 per cent; and the "E's," or failures, from 2 to 10 per cent. A simple plan discussed by Bennett[1] which has worked satisfactorily is essentially of the same type as these, but with the proportions modified somewhat. It operates in this way: As early in the term as pos-

[1] Bennett, Henry E. School Efficiency. Ginn & Co., 1917.

[2] Finkelstein, I. E. The Marking System in Theory and Practice. Worwick & York, Baltimore, 1913.

sible the teacher divides her pupils, not physically but for purposes of instruction, into four tentative groups; the first being the "best quarter" of the class; the second consisting of the "second best quarter"; the third comprising all the others who have done work which will entitle them to be passed; and the fourth being those whose work is considered of a doubtful quality. These groups can be lettered, for convenience of reference, "A," "B," "C," "D," or, for that matter, any other letters or symbols would do just as well. The special attention and effort of the teacher throughout the term should of course be devoted to those in group "D," in order that the number therein who are finally required to repeat the term's work, designated as "E," shall be as few as possible. And none should be failed, finally, without the sanction of principal and supervisor after careful review and consideration and with the question consciously in mind: Where will the pupil profit most, in the old grade or in the new?

In practice, it should be observed, the teacher will occasionally find it necessary to deviate from the adopted norm of distribution. She should not hesitate to make such deviation if it seems to her to be necessary, but in every instance of failure to adhere she should be expected to make a full and satisfactory explanation to supervisor or superintendent.

Such plans as the foregoing are based upon two assumptions: That the work of a given grade and the standards demanded therein shall be so shaped that the large majority of the class shall at all times be doing successful work; also, that in every class the normal distribution of ability is approximately the same. Neither of these assumptions can be seriously questioned, we feel. Furthermore, the adoption of some such plan as this would make impossible such wide variations in standards of promotions as are to be found among the teachers of the schools of Columbia, for in each instance, under its operation, it is clear the class itself would virtually determine its own standard by which the individual members shall be judged in respect to promotion. Such a promotion basis as this would do away, too, with the necessity of spending so much of the all-too-limited time of the school on formal examinations and in grading the papers and recording and averaging the results.

THE PLACE OF FORMAL EXAMINATIONS.

Written examinations given in the form of tests at intervals during the term have a place in school procedure for which it is impossible to find a complete substitute, but as a basis for determining a pupil's fitness for promotion the formal examination held at stated times has fallen into disrepute. It is a useful means, for example, of showing the teacher where the preparation has been weak and

where it has been strong; it trains the pupil to use language concisely and with precision, under sharply drawn limits of time; it requires the quick exercise of judgment in respect to what is essential and what is relatively less essential; and it tests the ability quickly to organize knowledge and information in a new setting. But, in general, when promotion is made to turn upon it, in whole or in any considerable degree, the examination inevitably leads to "cramming," to undue worry and nervousness, and to working with the sole end in view of passing, causing the entire work of the school to center about the one idea. It puts a premium upon wrong methods, and stresses what should be but a mere incident in the plan of education; it provokes bitterness and unseemly strife between parents and teachers; and it occasions a vast amount of unnecessary and unprofitable labor for the teacher in reading an endless number of papers, in keeping records, and in making out reports.

That the formal examination is no criterion for determining ability is a conclusion abundantly supported by an examination of the school careers of men who have become famous. For example, Thomas A. Edison never could pass his school examinations, and when his teacher reported that it was a waste of time for him to attend school he was taken out and never returned. Charles W. Eliot, while president of Harvard University, once remarked that he would not have been able to pass the entrance examinations of his own university. Henry Ward Beecher stood sixty-fourth in an examination in grammar, while the boy who ranked first became a barber in a southern city. It is related that a Japanese university once appointed a faculty committee to investigate and report upon the question as to what examination could be given the youth of that land in order that young men of the greatest promise for the future might be selected. After an exhaustive study of the biographies of eminent men the report submitted was: "The one most prevalent characteristic of men of mark in their school days is that they could not pass their examinations." McAndrews,[1] who mentions these instances, among other illustrations, reports that he once took the examination records of 90 pupils entering a private high school, and divided them into 10 groups according to rank. At the end of each year for a period of years he reclassified them into the same groups and expressed the progressive standing of each pupil by a diagram consisting of lines which theoretically should have run in nearly a straight line across the page. Actually, however, the lines crossed and recrossed as lowest-group pupils rose to the highest group and the highest fell into medium or low places.

The school administrators and teachers of Columbia will do well to investigate thoroughly the basis of pupil promotion; to read the

[1] McAndrews. Our Old Friend, The Examination. Nat. Educ. Assoc., 1916, p. 527.

extensive literature of the discussion which has now been on for several years; and to examine the plans which are being adopted in other cities. Out of such critical examination will come a revision of their own plan which will eliminate the objectionable features now much in evidence and which unwittingly work injustice to many children.

2. THE TEACHING ACTIVITIES OF THE CLASSROOM.

THE NEED FOR COORDINATED EFFORT.

Coordinated effort by the teachers of a system, which is one of the tangible results of constructive and helpful supervision of adequate extent, is by no means to be confused with uniformity in detailed practice. Within the field of education uniformity of special method, uniformity of schedule, uniformity of procedure, beyond that which has to do with making certain responses automatic, is to be condemned. Efficiency in a corps of teachers and efficiency in a corps of bricklayers are to be obtained in ways and by methods which are fundamentally different. The latter demands uniformity of aim and uniformity of method, reaching even to machine-like uniformity of movement, if the highest efficiency is to be attained; the former demands unity of purpose and of defined aim, but diversity and variety of method. While supervision in education then should seek to establish a clear-cut program of work in general, there should be the utmost freedom given the individual in the devices which he employs in accomplishing his part of the assigned task. Without such clearly defined purpose set up for the corps as a whole, practice will be haphazard, chaotic, decentralized, and hence ineffective, however excellent may be the work of individual teachers.

On the other hand, effort arbitrarily and artificially exercised to make uniform the practice of the members in dealing with the minutiæ of schoolroom procedure will inevitably place upon a system a weight so deadening as to inhibit the exercise of that spontaneity and personal initiative so vital to teaching work of the first order. There are two dangers then which supervisors must avoid: Insisting upon uniformity of special method and not insisting upon unity of aim and of general method. The first of these, which results from a too mechanical system of supervision or because of a lack of interest and of initiative in the teaching corps, tends to produce a rigid, dry-as-dust, devitalized system. The latter danger arising either from a lack of vision and of discernment on the part of supervisors, or more frequently perhaps from a lack of sufficient supervision, if fallen into, brings about a condition similar to that wherein a team of horses are straining in opposing directions—effort is neutralized and rendered ineffective.

In respect to these two instructional and administrative dangers the system of Columbia has more fear from the latter, though it should be pointed out the first horn of the dilemma has not been altogether avoided.

Requiring that all classroom schedules within a given grade shall be uniform throughout the system; that pupils of high-school age shall march in and out of the building and from room to room, as do children of the primary grades; that high-school teachers shall employ the demerit system of marking deportment, one credit off for talking, one for minor misdemeanors, three for insolent rejoinders to teachers, and so on; promotion determined throughout by examination; and the putting of certain classes in a school on half time because the corresponding grades of another school are crowded and are obliged to go on half time, to the end that all may advance at the same rate, are some of the ways by which a system is formalized and made rigid and mechanical. Operating too, in the same direction and in a powerful way are the factors of an academic course of study and a great deficiency in school equipment needed to supplement the course and to enrich and vitalize the work. With a narrowly academic course of study and without supplementary aids teachers are unavoidably thrown back upon a complete dependence upon the prescribed textbooks, which in time tends to make teaching dry and formal and mechanical.

That the fear that such influences are at work in the Columbia schools tending toward a static condition is not groundless is shown by the fact that the survey committee was unable to find evidence that individual teachers, with too few exceptions, were trying out any new departures in their work; neither could the committee find that schools as wholes were striking out on distinctive lines of interest, although the question was put to many teachers and principals. A system that is growing will be changing; will be on the qui vive for suggestions; will be trying new things both individually and collectively; will be discarding outworn practices and substituting new ones; in short, will be showing the external manifestations of internal life. The committee was not able to escape the conclusion that the Columbia system, due in considerable part surely to lack of adequate maintenance and the benumbing effect which poverty produces, is now resting to a disquieting degree under an incubus which begets inertia.

Examples of the second danger, the danger of disintegrated and disunited effort in carrying into schoolroom effect defined pedagogical purpose, are likewise in evidence. Perhaps the first illustration to be cited is that not all of the teachers recognize the truth of what a few individuals are practicing, that a vital distinction exists between teaching to establish habits and teaching which is

intended to arouse emotions, to appeal to the feelings, to meet standards of conduct.

THE TWOFOLD TASK OF THE SCHOOL.

Upon the school society has placed a twofold task—that of establishing certain necessary habits and that of transmitting a body of useful relations. That is to say, in every subject studied in the schoolroom there are some things which, because of their intrinsic value, need to be known so well that correct responses become automatic. The multiplication table in arithmetic, some locative facts in geography, a few dates and names in history, certain correct usages of language, legibility and rapidity in the use of the pen, the correct spelling of certain words are illustrations of facts and habits which need to be so well established that they become automatic, making certain that correct responses come instantly without the necessity of the exercise of thought. It is a legitimate and necessary task of the school to see to it that this formal side of the education of the youth be secured. On the other hand, the larger task, though no more important one, is to transmit that body of relations among facts which the social group has found to be essential. This fundamental distinction between the formal content of education and that which has to do with relations, with generalizations, with principles, suggests at once a fundamental distinction in the methodology of the schoolroom. That is to say, experience and reflection have shown that certain types of teaching methods are effective in the field of the formal, whereas certain other methods of procedure are best in the field of the "cultural," as the second is frequently called. In the one case the object is to establish habits, to make the use of facts automatic; in the other case the purpose is to arouse thought processes, to direct them along recognized lines, to discover thereby certain valuable relationships. The method best adapted to accomplish the first task is drill; that which has been found most effective in the second is the method of organized oral discussion. In the field of the automatic "thinking" is a mistake; in the field of the cultural to get relations by process of memory and drill and to avoid the full processes of thinking are likewise mistaken pedagogy.

Older education emphasized the former field, newer education the latter. Correct education will recognize the value of both, will carefully include in its course only the essentials of each, and will insist that each of these two tasks be done effectively by the general methods operative in the respective fields. The older schools carried drill to an absurd extreme; the newer schools, in the reaction away from excessive drill, went to the other extreme and declared that the necessary facts and habits could be gotten incidentally. We now know that the things which are left to incidental treatment are not gotten

at all and that the older schools were partly right and that the newer schools were only partly right. Best recent practice recognizes that the school has a twofold task and that the methodology of accomplishing the one is not applicable in getting results in the other.

CONFUSION IN METHODOLOGY.

Some teachers in Columbia, when a child can not tell promptly what the sum of 7 and 5 is, tell him to "think." So the child uses his fingers as an abacus and thus "thinks" out his answer. The fact, however, that the child can not recall instantly the sum of 7 and 5 and that he has to "think" about it is clear evidence that the teacher has not been successful in her work, in this particular at least, for her methods should have made it unnecessary for the child to do any "thinking" about it. Indeed, within the field of the formal, "thinking" is out of place for the very purpose of making things automatic and habitual is to get rid of the necessity for thinking. On the other hand, many teachers of Columbia are holding the children responsible for the list of relationships among facts which the several textbooks set forth without sufficient (in some instances without any) class discussion participated in by all to make the generalizations by the several authors mean anything beyond dogmatic statements. The failure of many of the teachers of Columbia to recognize that there is this fundamental distinction to be drawn in both the content and method of the several subjects of the curriculum accounts for much poor teaching. There are teachers in the department, however, who, it should be stated, do differentiate between the formal and cultural subjects in this matter. The work of these stand out in the corps, but until the corps as a whole recognizes this distinction and seeks to employ it in practice there will not be that good team work which ought to be the desideratum of all supervision and which is based in considerable measure upon unity in aim and in general method.

THE NEED OF ENRICHING MATERIAL.

Doubtless one reason why not more oral class discussion of lively character was found either in the elementary schools or in the classes of high-school rank, though there were notable exceptions in both, is due to the pitiable lack of supplemental help, such as books, charts, maps, and illustrative material of various kinds which the modern school finds indispensable.

Without such enriching material, the teacher is forced to depend entirely upon the textbooks which the pupils purchase. Now, a textbook because of its space limitations can be little more than an outline or a compendium of generalizations which its author has

compiled. The mere memorization of these generalizations is of no educational value. The value comes in wisely guiding the child along the path the author took in reaching his generalizations and in showing the child some of the rich and interesting detail which the author had before him when he was occupied in writing his text. By having such concrete detail at hand and through the rough-and-tumble of an interested group discussion wherein the children themselves constantly raise the questions which their interest prompts, the wise teacher can make the abstract principles and formal statements of the text mean something. Such work is genuine teaching, and its value is high, for thereby the child can be taught to attack a problem; how and where to secure data necessary to the forming of valid conclusions; how to compare and contrast statements; how to distinguish between the author's major point, his minor points, and the material which he employs to illustrate each; in short, thereby he can be taught how to study and not only how to study while he is yet in school but how to study for himself after he leaves school and begins his life work.

A library of books, then, which correlate with the subjects studied in the schoolroom should be accessible to every child in Columbia. Much of the work of each child should be that of delving into the rich material which can be assembled to seek out facts pertaining to the subject in hand, bringing these into the classroom and pooling them with similar contributions by the other members. In the doing of this the pupil will become familiar with library methods, with card catalogues, with ways of finding material in the magazine files, with various encyclopaedias and dictionaries, and how to make use of tables of contents and indexes. By so doing not only is the child himself to a degree drawing his own generalizations from out the body of concrete detail which lies at hand (infinitely more valuable than memorizing an author's conclusions), but he is learning how, while he is yet in school, to employ the methods he must use when he gets out of school if he is ever to accomplish anything as a student.

In respect to such fund of accessible material, the pupils in the schools of Columbia are woefully handicapped; far more so, in fact, than are children who attend country schools in many of the isolated places of this country. The public library is not of much help, for except for the rent and the small amount received by the librarian as salary, all support is by voluntary contribution, which is always intermittent and inadequate. The few books which are in the high-school library are kept locked up, because no way has yet been worked out for preventing loss when the children are given access to them; only beginnings of libraries have been started in the elementary schools by parent-teachers' associations, while the board of education is too hard pressed for funds in other directions to do much in the

building up of such vital equipment. In instances in the high school and in certain classrooms in the grades individual teachers, out of their own salaries, have purchased material of this character. A difference in the effectiveness of the work of such, as compared with those lacking such vitalizing and enriching material, is easily discernible.

HIGH SCHOOLS NEED WELL-EQUIPPED LIBRARY ROOMS.

The teaching activities of a high school, in particular, should be made to center about the library, for in no other way can the pedagogical error be avoided of attempting to teach subjects instead of teaching how to study subjects. It is clear that in the limited time of a high-school course, and with immature pupils who comprise the student personnel, no relatively complete mastery of any subject can be obtained. But a trail through the woods of each subject in the courses offered can be blazed, and the pupils can be taught how to use the tools which are indispensable to such work. Owing to the complete lack of books and of library facilities, the high-school teachers of Columbia are attempting only to teach the subjects assigned; in consequence, the pupils are not learning anything at all about how to go about independent study. Learning how to use a library—that is, learning how to use the tools of study—should be begun well down in the grades and continued throughout the entire school course. At present Columbia is financially interested in providing library facilities for her citizens only to the extent of $65 per month—$30 for rent of the library rooms, $35 for the librarian's salary, and nothing for books. A project for a Carnegie library was turned down, because it was thought Columbia could not afford to keep up the running expenses required. If pupils go through the elementary and high schools as they are now doing, without gaining any first-hand acquaintanceship with library methods, nor any appreciation of the need or value of books in pursuing their studies, it is difficult to see how, when they graduate and settle down in the community as citizens, they will be any more interested in securing better library facilities provided for at public expense than is the present citizenship of Columbia. The schools will not have done their rightful duty in the matter unless through the practical work of the classroom a demand for books is created so insistent as to lead to action.

A room convenient to the study hall of the high school should be set apart as a library room; the manual training department could equip it with tables, book racks, and filing cases for pictures and clippings; a teacher trained in library methods should be placed in charge; and a sufficient amount should be provided in the yearly budget to enable a good working aggregation of books adapted to the

work of the classes to be quickly assembled. The invigorating influence of such an arrangement would be felt at once.

A working basis for such an allowance is suggested by Chancellor,[1] who has made a special study of the problems of school administration. His estimate of what a school department should do in this connection, together with his comment thereon, follows:

ESTIMATE OF A YEARLY ALLOWANCE FOR BOOKS AND SUPPLIES.

As with a household of highly educated people, so with a school, the tendency is steadily to increase the demand for funds to meet increasing needs. To desire things and services is to live in civilization. The following standard of allowances for books, general supplies, manual training, etc., is a reasonable minimum where a community means to have good schools. With experience much larger sums can be well spent, and education will be correspondingly improved.

High school.

Books (per pupil)	$4.00
Manual training	10.00
For science apparatus annually per class of 24 pupils	250.00
For reference books per class of 24 pupils	50.00
Stationery	1.00
Incidentals	1.00

Elementary schools.

Grammar grades:	
Books (per pupil)	$2.00
Manual training	4.00
Stationery	.75
Incidentals	.50
Primary grades:	
Books (per pupil)	$1.00
Manual training	2.00
Stationery	.50
Incidentals	.25
Kindergarten:	
All supplies (per pupil)	1.00

General.

For reference books per class of 42 pupils	20.00
For library (class) per class	25.00

Evening school.

All books and supplies per class of 24 pupils, excepting science and manual training	50.00

For evening lectures, $10 to $25 may be allowed for the lecturer, $5 to $10 for his expenses (average), and $5 for lantern operator. In a public lecture course, most of the lectures should be illustrated.

[1] Chancellor, W. E. Our Schools, Their Administration and Supervision. (1909), p. 382.

The foregoing allowances do not include the stereopticon lantern and slides for every school, and at least two pianos in every elementary school, one for the assembly room and one for the kindergarten.

THE METHOD OF ORGANIZED ORAL DISCUSSION.

The general method of organized oral discussion based upon the pupils' access to interesting and pertinent material is a procedure, however, that can not be employed without some care, for, unless carefully guarded against, discursiveness in discussions will ensue and no tangible precipitate will result. To secure satisfactory results, the reading and discussion must proceed systematically and orderly. The teacher must make the material used subservient to her own plan and scheme of lessons and not be led by it; and in conducting the recitation she must guide the discussion, otherwise it will drift into aimless, desultory, fruitless conversations. This demands that the teacher devote considerable time to preparation, for if she herself has first worked over the material accessible to the children she can better determine what direction it will be best to give the discussion and what contribution she can properly expect from the pupils. In the presentation there are certain facts which are important apart from their bearing in the development of a given generalization. These intrinsically valuable facts should be gotten up at the close of the series of lessons, preserved in notebooks, and be made the subject of brief reviews and drills from time to time to insure permanency of retention. Unless this is done, it will be found that confusion of mind will ensue and that valuable results will have been lost.

Such work has for its purpose, primarily, the discovery of general knowledge, during the progress of which the teacher guides her pupils through their study of objects, examples, concrete details to certain generalizations which, taken together, constitute the principles of the given subject. In themselves and of themselves particular ideas or specific facts have little meaning or significance. The value lies in the meanings, explanations, relationships which can be detected, and which, in turn, can be employed to interpret other facts and determine other activities.

THE FIVE FORMAL STEPS OF THE HERBARTIANS.

Such work, if consistently carried out, is both inductive and deductive in nature, the essential stages of which comprehend the five formal steps of instruction formulated by the Herbartians: 1, Preparation; 2, presentation; 3, comparison; 4, generalization; 5, application; or, putting it another way, there should be, first of all, a clear statement of the problem in relation to essential details and significant facts; then, by comparison and contrast of individual

facts, a hypothesis or tentative generalization is reached, which, through application to a fresh set of facts, by way of interpretation and of reviewing the ground already gone over, is tested out. Huxley,[1] in discussing the steps through which the mind moves in the acquisition of general truths, is in essential agreement with the Herbartians, as McMurry[2] points out. Huxley's statement is:

> The subject matter of biological science is different from that of other sciences, but the methods of all are identical.
>
> And their methods are:
>
> 1. Observation of facts, including under this head that artificial observation which is called experiment.
>
> 2. That process of tying up similar facts into bundles, ticketed and ready for use, which is called comparison and classification, the results of the process, the ticketed bundles, being named general propositions.
>
> 3. Deduction, which takes us from the general proposition to facts gained—teaches us, if I may say so, to anticipate from the ticket what is inside the bundle. And, finally—
>
> 4. Verification, which is the process of ascertaining whether, in point of fact, our anticipation is a correct one.
>
> Such are the methods of all science whatsoever.

While good teaching practice does not demand that these steps be formally segregated and rigidly followed, for such procedure tends to formalize instruction and make it mechanical, nevertheless good results require that this round of steps or stages in instruction be not seriously invaded, though, it should be added, such complete round should not necessarily be effected within the short space of a single recitation period, for a given lesson unit may properly require a number of recitation periods for its presentation.

THE FUNCTION OF THE TEXTBOOK.

It must not be overlooked, in work of this character, however, that the proper function of the textbook is to supply the pupils' need for a handy reference book, on the one hand, and, on the other, to meet the need of the teacher for a succinct statement or outline of the essential principles and general notions of the subject under consideration. The content of school subjects, it must not be forgotten, first of all exists outside the covers of the text; neither is it, in its original state, broken up into subjects and set forth in logical sequence and systematic arrangement. This is a device of pedagogues and bookmakers for convenience of instruction. The procedure has value, but when the subject matter of education is disassociated from the activities and processes of the world which created it; when it is divided up into compartments called "subjects"; and when each is hydraulically compressed between the covers of a two or three hundred page text and taken into the schoolroom, there

[1] Huxley. Lay Sermons, p. 83.
[2] McMurry. The Method of the Recitation, p. 290.

is a strong tendency for the teacher to go about her teaching as though the textbook comprised the whole of education; as though its contents were wholly dissociated from the life going on all about; as though she looked upon it merely as something to be memorized, recited, examined, and then cast aside and forgotten.

EDUCATION IS REMAKING AND EXTENDING EXPERIENCE.[1]

Education is coming now to be looked upon as that process by which we remake and extend our experience and in the process acquire that body of habits and of knowledge which freedom and effectiveness in the social group demand. The ideal way of securing such education is by actual personal contact with the essential realities of life, very much as the race has gotten its education. But this is found, in its extreme form, to be impracticable; it takes too much time for one thing; then, life as it runs deals with detail, and detail without order or arrangement. To short-cut the educational period through which the race has gone we must group and classify details and integrate them, pointing out their essential relationships and the rules and principles which govern them. But one's own experience can be remade and extended only as such activity deals with the realities in some individual, personal, and truly vital way. Hence, the teacher at every opportunity should break away from reliance upon the text and take advantage of every chance to bring her children into direct contact with the processes and activities themselves. An important step in this direction, where the experience with the thing itself is not possible, is to get a variety of books dealing with concrete detail in a vivid and interesting way; organize this material about essential, integrating, and unifying principles; meanwhile connecting the whole up with the child's old experience in an effective way. In this manner errors are corrected; limited and meager conceptions are enriched and made pregnant with meaning; and new associations among the various elements are established; thus experience is worked over and added to and readjusted, which is education. Limiting a pupil's time and thought to the summary or the contents of a subject which the author of a given text sets forth, however valuable the text may be as an outline, will never create experience, neither will it contribute, except slowly and in meager degree, to his education.

Obviously, then, in the teaching of any subject or of any topic a basis in experience is indispensable, for there can be no remaking of experience if experience be lacking. The teacher, therefore, who takes up ideas for which there is no foundation in the pupil's experience will cause a break in the educational process which will lead

[1] Earhart, Lida B. Types of Teaching.

to confused attempts to understand, resulting finally in mere memorization, if the pupil be working under the spur of a prospective examination. So, also, will the educational process be broken if the teacher does the major part of the work herself, as many do, for thereby she and not the child will be gaining the experience and hence the education. Verbatim reproductions; rote recitations; unorganized and detached reading, observation, experiment, or investigation; the assignment of lessons by pages rather than by topics; the viewing of the textbook as the source rather than as an outline of subject matter: the failure to recognize that both particular facts and general truths have differing values; too much attention to the machinery of education and not enough to its spirit; the insistence on a standard of thoroughness so high as to become deadening in its effect; the lack on the part of the teacher of a mastery of the subject matter under discussion and of a clear organization of its content in her own mind; and the failure to follow up her work with cumulative reviews of a few important matters to be kept clearly in mind are among the chief pedagogical sins which interfere with the process by which the child remakes and extends his own experience.

WHAT SUPERVISION SHOULD ACCOMPLISH.

Good supervision, by setting forth in clear light the basic principles underlying teaching practice, by defining the criteria by which both the method and the result are to be judged, will thereby take a long step forward in eliminating from the corps such mistaken practices as the foregoing; for by so doing, the teachers will be given definite standards by which to square their own efforts. Good supervision, in addition, will, in kindly fashion, point out to the individuals wherein their special methods and particular practices fall short of the ideal which has been defined for the corps. Good supervision. too, will not fail in commending those instances wherein the procedure is of the character required; for it must not be forgotten that it is good work which should be sought, rather than bad work, and that with most people a single word of commendation, where commendation can honestly be made, far outweights 50 spoken in a fault-finding spirit. The words of Roger Ascham, the famous English schoolmaster of the sixteenth century, are quite as true of teachers and of teaching as they are of children, of whom he wrote, apropos of the study of Latin:

> Where the childe doth well, either in chosing, or true placing of wordes, let the master praise him, and saie, "here do ye well!" For I assure you, there is no such whetstone, to sharpen a good witte and encourage a will to learninge, as is praise. But if the childe misse, either in forgetting a worde, or in changing a good with a worse, or misordering the sentence, I would not have the master either frowne or chide with him, if the childe have done his diligence,

and used no trewandship (truantship) therein. For I know by good experience that a childe shall take more profit of two fautes (faults) kentlie (gently) warned of, than of foure things, rightly hitt."[1]

THE WASTAGE OF TIME.

Inadequate coordination of the efforts of the Columbia corps again expresses itself in the frittering away of a tremendous amount of time, in the aggregate, by the children in the schools. Many of the teachers have their work so well planned that at every minute of the day they know exactly what they are going to do next. In consequence, they never lose any time in turning from one thing to another; there are no ragged or frayed edges to their work; everything is crisp and clear cut; and both the teacher's and the pupils' time is utilized to the utmost. Such a teacher appreciates the fact that there are just so many minutes in the day and that there are none to be lost through unnecessary interruptions nor through lack of a definite plan of procedure. Such teachers during the first few days of a school term establish in their classes certain methods of procedure which are held to throughout the term. These have to do with such matters as how the class shall enter and leave the room; how it shall pass to the blackboards; how papers shall be distributed and collected; how the children shall stand when reciting; how the teacher's attention is to be secured with the least disturbance to others; what shall be done with hats and wraps and how they shall be distributed; what is to be understood about whispering and about helping one another; what is to be done in a fire drill—in short, all those matters which affect the handling of the class as a whole and which can be rendered automatic and habitual are taken up, the method of procedure set forth and then held to, to the end that these matters may not be constantly intruding themselves, diverting the attention of teachers and children, disrupting and disorganizing the work, and wasting the precious time of all.

Aside from the failure to plan work carefully and to organize and make habitual the general schoolroom activities of the class, there is a third danger point from the standpoint of wastage of time, especially in the primary grades, namely, in the so-called "busy work" devices. In classes of normal size it is impossible for the teacher of the primary grades to hold the attention of all of the pupils when taken en masse. It is customary, therefore, to break the class up into two or more groups and to give those at the seats "busy work" to occupy their attention while the remainder of the class are reciting under the immediate direction of the teacher. Such "busy work" consists of number, word, or phonogram cards, blocks, pictures, colored crayon, dominoes, scissors and paper, raffia weaving,

[1] Ascham, Roger. The Scholemaster. Arber Edition, p. 62.

and what not, all ostensibly engaging the child in activities which are profitable educationally. This matter of "busy work" is a difficult problem for primary grade teachers at best; but in Columbia, except in a few instances, it is not being well handled, for it is all too evident that but poor success attends the efforts. This, however, it should be pointed out, is in part due to a pitiable meagerness of equipment at the command of the teachers, with the result that in an unduly high percentage of cases the devices merely keep the children quiet while the teacher is occupied with others. In such instances it would be more profitable were the children to be sent out of doors and permitted to play their games. Smaller classes, better equipment, a clearer view of the pedagogy involved, more definite planning of the teachers' work, more adequate supervision, and beginning children trained in good kindergartens are ways whereby this difficulty of profitably occupying the time of primary grade children can be met.

Observation will convince one that the aggregate wastage of children's time in many schoolrooms in every system is enormous. It is a matter deserving the most thoughtful attention of every supervisor and teacher. Lack of careful planning of the day's work accounts for much of it; permitting interruptions of all kinds (entertainments, reports, parades, preparation for holidays and vacations) to the orderly procedure of school work accounts for much also; but the fundamental difficulty is the fact that too few teachers place a high value on the work they are doing, consequently they feel that the loss of a little time here and there, the aggregate amount of which during a term or year they utterly underestimate, does not much matter. The teacher who holds her own work in high esteem, and who has the interest of her pupils truly at heart, will be very jealous of encroachments by anybody upon her time. Superintendents, supervisors, and principals should stoutly support her in such an attitude, and avoid, except in emergencies, the practice of sending around notices or calling for reports on special matters, or in any other way diverting her attention from the work she is in her classroom expressly to do. With the multitude of demands pressing in on the school—ethical, moral, patriotic, esthetic—it must not be forgotten that the peculiar function of the school is still that of providing a place where children are to be taught by teachers. Efficiency in this work demands primarily that the teaching process be not interrupted.

TIME WASTAGE IN THE HIGH SCHOOL.

That the wastage of time is not limited to the primary grades of our school systems is obvious to anyone who has had experience in school visitation, but the extent is a surprise, doubtless, to all who

have not made the matter a subject of investigation. Another study of the same character, this time of high-school classes, was made by Stephen S. Colvin, the State inspector of the high schools of Rhode Island. He reports, after an observation of 200 high school recitation periods, the following distribution:

During 1 period of the 200 which he witnessed the pupils of the class were mentally active but 2 minutes of the total 45 minutes; during 5 periods the class was active for approximately 5 minutes; during 9 periods for 10 minutes; during 21 periods for 15 minutes; during 37 periods for 20 minutes; during 55 periods for 25 minutes; during 38 periods for 30 minutes; during 22 periods for 35 minutes; during 9 periods for 40 minutes; and during 3 periods only did the classes observed profitably employ as much as 42 of the 45 minutes. That is, out of a possible teaching time of 9,000 minutes, 4,943 minutes were employed, and 4,057 minutes were wasted. Commenting on these results he says:

> These observations seem to indicate that under ordinary classroom conditions in a large-sized high school, half of the day is wasted. While conditions vary greatly with various teachers, subjects, schools, and classes, it is probable that on the average the waste is no less than that found in the classes observed.[1]

In his analysis of the causes of this wastage in the classroom, Colvin, among other reasons, enumerates the following: The materials used in laboratory and classroom are not placed where they are readily accessible, nor is the routing of the material planned out in systematic detail. Time is wasted in such mechanical operations as the distribution of themes and paper and in passing to and from the blackboard. Much of the material which the pupil gets through dictation by the teacher could be gotten more economically in other ways. Requiring pupils to write out each question, as well as its answer, as in an examination, is often a waste of time. Employing many profitless forms of written work, the careless assignment of lessons and the failure of the teacher to impress the pupil with the value of the task assigned account also for much wastage. And, finally, using uneconomical methods of testing the knowledge of pupils, roundabout and unpsychological methods of drill, wasteful and unskillful methods of questioning, vague statements by both teacher and pupils, and the lack of an adequate lesson plan are other causes entering into this matter of the wastage of time, he holds.

THE NEGLECT OF PUPILS IN THE RECITATION.

Along another line, too, teachers, not only of the high school but of the grades as well, should be on their guard to prevent wastage, that is, through failing to grant to every pupil equal opportunity for par-

[1] Colvin. An Introduction to High School Teaching. Macmillan, 1917, p. 128.

ticipation in the activities of the classroom. Unless teachers are very careful, certain pupils in every class are sure to be neglected. Owing to the difference among pupils in ability, initiative, aggressiveness, talkativeness, and general attractiveness of personality, it is found that opportunity for participation is unequally distributed. A study of this matter by Dr. Ernest Horn,[1] in 1913 and 1914, sought answers to the following questions:

1. How equally is opportunity for classroom participation distributed? 2. What is the relation between the amount of reciting done and the general all-round ability of the pupil? 3. What is the relation between the amount of reciting done in each subject and the special ability in this subject? 4. How many opportunities for participation in class work does the pupil have per hour? 5. What proportion of the pupils' recitations are utter failures? 6. What is the relative amount of time given to talking as a form of participation as compared with other activities? 7. How many of the pupils' recitations consist of consecutive participations without the recitations of any other pupils intervening? 8. What is the length of pupils' recitations?

Records were made in the classes of 229 teachers in 22 different schools of 19 different systems in 11 different States and embraced data taken from the kindergarten, from each of the elementary grades, from the high school, and from the college. Conclusions were not reached on all these points, but several general tendencies stood out clearly, chief of which are the following:

The best fourth of a class in general ability does about one and three-fifths times its equal share of reciting; the second fourth, about one and one-ninth times an equal share; the third fourth, about four-fifths of its share; and the last fourth, approximately less than one-half of its share. That is, in general, the lowest quarter in ability does about a fourth as much reciting as does the highest quarter. There is also in evidence a tendency for the percentage of reciting done by the best quarter to increase with an advancing grade, so that the best pupils in the upper grammar grades do more reciting proportionally than the best pupils in primary grades. This inequality in recitation, too, is higher in the content subjects than in those subjects where the formal element predominates. That is, in phonics, spelling, and mathematics the distribution is tolerably even; in geography, science, and literature the first quarter does about one and one-half times as much reciting as does the fourth quarter; whereas in English composition, history, social, and industrial life, and in music the distribution is much more uneven, the first quarter doing from one and four-fifths to two and three-fourths as much reciting as does the fourth quarter.

That the formal subjects of school curricula should be those in which is found the greatest equality of opportunity is to be expected,

[1] Horn, Ernest. Distribution of Opportunity for Participation Among the Various Pupils in Classroom Recitations. Teachers College, Columbia University; Contributions to Education, No. 67.

for the methods which are particularly adapted to the teaching of formal subjects are those in which it is relatively easy for teachers to secure an equable distribution of opportunity. On the other hand, in dealing with a content which depends largely upon the method of organized oral discussions, the subject matter is more difficult and likewise more interesting to the teacher, so that her attention is likely to be occupied more with the subject than with questions of classroom procedure. This also explains, in part, doubtless, the tendency for inequality of opportunity to become accentuated as one advances on up the grade-line; the greater age of the pupil, too, makes him better able to make his personality felt in gaining the recognition and attention of the teacher in contrast with those whose exercise of personal initiative is less marked.

In summary, then, of this discussion of the instructional activities of the classroom, a pedagogical rosary might be suggested, the beads of which should be religiously "said over," morning, noon, and night by every supervisor and teacher:

Am I distinguishing between formal and cultural content and do I use methods adapted to each? Am I guarding against discursiveness in classroom discussion? Do I make effective use of every minute in the teaching day? Have I systematized my schoolroom procedure so that no time is lost? Is my teaching so shaped that the experience of every child is being remade and extended? Do I give the timid unprepossessing pupil in my class as much attention and opportunity as I do the brilliant and attractive pupil? Is my teaching serious and thoughtful or does it consist chiefly of memoriter work? Do I conduct my classes in a clear-cut well-defined way, as though I knew what I wanted and how to get it? Do I make my lesson assignments in a way such that the pupils can work intelligently and economically? Is new matter carefully based on that which the pupil knows? Am I requiring my pupils to draw their own conclusions and generalizations as a result of their own efforts and am I giving them the concrete material essential to work of this character? Do I see to it that when generalizations are made they are applied to new sets of concrete details? Am I skillfully using the pupil's out-of-school experience to illustrate the points I want to make? Am I developing each subject clearly and logically according to its own nature and correlating the school subjects properly? Am I sufficiently familiar with the work of the system as a whole to know what pupils have studied when they come to me and to know what work they are expected to do when they leave me? Am I getting acquainted with my pupils as individuals, with their home life, with their school life, and am I making full use of this knowledge?

UNIVERSITY STANDING OF COLUMBIA HIGH-SCHOOL GRADUATES.

In connection with this discussion of the teaching activities of the classroom the committee considered it of value, as well as of interest, to secure a statement from the dean of the University of South Carolina regarding the scholarship record in the university made by the graduates of the local high school in comparison with the average record made by all of the students of the university and in compari-

son also with various school groups. As it turns out, however, the only comparison of any especial significance is the one between the Columbia group and the total student body of the university, for there are too few students in other high-school groups to warrant the drawing of comparisons with them.

The records show that during the first semester of 1917–18, Columbia graduates, of all classes, were graded on an aggregate of 139 units of work. Of this number 48 units were graded "A," the highest mark given; 83 were graded "B"; 5 units were conditioned; and 3 classified as failures. That is to say, 34.5 per cent of the work fell into the first scholarship rank, against an average for the university of 32.5 per cent; 59.7 per cent of the work was given a second grade as compared with an average for the university of 54 per cent; while but three-tenths of 1 per cent was conditioned and two-tenths of 1 per cent failed, in comparison with an average for the university of 9.8 per cent and 4.1 per cent, respectively. In other words, Columbia graduates maintained a rank well above the average scholarship ranking for the university. The table which follows bears out the statement made by the dean: "I can say that our records for the past five or six years show that the Columbia students generally maintain a high average of scholarship."

Relative achievements of university students, first semester, 1917–18.

Students.	Total number of students ceiving a mark.	Grand total of units of work taken by all students.	Scholarship mark.							
			"A" 90–100.		"B" 75–89.		"C" 65–74 (condition).		"D" 0–64 (failure).	
			Total units.	Percentage of grand total.	Total units.	Percentage of grand total.	Total units.	Percentage of grand total.	Total units.	Percentage of grand total.
University undergraduates	254	1,445	467	32.5	778	54.0	140	9.8	60	4.1
Students from Columbia High School	24	139	48	34.5	83	59.7	5	.3	3	.2
Students from Charleston	4	20	11	55.0	7	35.0	2	10.0	.....	.....
Students from Mullins	5	31	13	41.9	18	58.0	.....	.....	.....	.....
Students from Lancaster	7	41	13	31.7	22	53.6	5	12.2	1	.2
Students from Florence	3	15	8	53.3	3	20.0	3	20.0	1	6.6
Students from Laurens	3	19	5	26.3	14	73.6	.....	.....	.....	.....

METHOD OF ENTERING THE UNIVERSITY FROM THE COLUMBIA HIGH SCHOOL.

Inasmuch as the statement has been made that the University of South Carolina admits students who have not completed a full four-year course at the high school, and that in consequence it is difficult

to hold together a fourth-year class in the local high school, the following compilation by the dean of the university is in point:

Columbia high-school students entering the University of South Carolina.

Sessions.	Total university enrollment from Columbia.	Number coming in by examination or with less than 4-year high-school course.	Number entering with full high-school course.
1914-15	7	.....	[1] 7
1915-16	16	.....	[1] 16
1916-17	5	[2] 2	[3] 3
1917-18	9	3	6

[1] Admitted by diploma; no fourth year in high school.
[2] Made full 14 units by examination.
[3] Graduated February, 1916; granted diploma for 3½-year course.

SUMMARY.

1. The teachers need more criticism of constructive and kindly character than they are now getting.

2. The superintendent has been too much occupied with the building program to give his attention to supervision; the principals have had to teach full time, and have therefore not supplied the needed supervision; a considerable part of the elementary school supervisor's time has been diverted to the distribution of supplies; in consequence, supervision of the teaching activities is inadequate and the work is lacking in coordination.

3. This lack of coordination expresses itself especially in the promotion of pupils, in the teaching activities of the classrooms, and in the achievement of the pupils as shown by the standard educational measurement tests.

4. The promotion plan based upon formal examination coupled with the term standing has resulted in a great variation among schools and among classes in standards of promotion.

5. This variation in promotion standards is even greater in the high school, where promotion is by subjects and not classes. This failure can not be accounted for wholly by irregularity in attendance.

6. The marks given by the teachers are inaccurate expressions of pupils' ability and work injustice on individuals.

7. The present system of promotion should be supplanted by the system which recognizes that there is a normal distribution of ability common to all groups of pupils.

8. In the instructional activities of Columbia there are evidences of two dangers—(1) toward inertia and (2) toward disintegrated and disunited effort.

9. The distinction between the methodology of the formal elements and the methodology of the cultural elements of a subject should be clearly drawn by the teachers.

10. There is much need of enriching courses of study through supplying adequate supplementary material and through building up school libraries.

11. The present close adherence to textbook teaching should be supplanted by the method of organized oral discussion.

12. Much attention needs to be directed to eliminating the wastage of pupils' time now taking place. This wastage is especially apparent in connection with the so-called "busy work" of the primary grades, in lack of a careful planning of the day's work, in frequent interruptions to the work of pupils and teachers, and in the failure of teachers to place a sufficiently high value on their own work.

13. Teachers need to be alert to see that the pupils who are timid, reticent, and retiring in disposition have just as much opportunity to participate in classroom work as those who are aggressive and talkative.

3. THE RESULTS OF THE STANDARD EDUCATIONAL MEASUREMENT TESTS.

Until within a decade the results of the teaching activities of the school, expressed in terms of the progress of children in the subjects which the schools offer, have been entirely a matter of personal opinion. No educational yardstick has been at hand by which efficiency could be judged and the relative standing of schools or of classes determined. Within a very few years, however, a system of tests has been devised and so standardized that it is now possible, in some lines of school work, to form a comparative estimate of the achievement of schools and of systems which is fairly accurate within the restricted fields wherein the tests operate.

So far as this movement has developed, it offers the greatest promise of success in providing a basis for judging of that part of school work which has to do with establishing automatic habits, as in spelling, penmanship, and the processes of arithmetic. There is much of the work of every good school, however, that is too intangible to admit of definite, precise measurement—the character-creating influence of the school, to mention but one illustration. On the other hand, there is much of the work of the school that is or should be definite, tangible, and hence measureable. It is in this field of the school's activity that educational measurement tests can render a district an important service.

Cubberley very well summarizes the larger possibilities of this development in educational practice when he says:[1]

> The significance of these new standards of measurement for our educational service is indeed large. Their use means nothing less than the ultimate transformation of school work from guesswork to scientific accuracy; the elimination of favoritism and politics from the work; the ending forever of the day when a personal or a political enemy of a superintendent can secure his re-

[1] Cubberley, E. P. Introduction to Educational Tests and Measurements. By Monroe, DeVoss, and Kelly, 1917.

moval, without regard to the efficiency of the school system he has built up; the substitution of well-trained experts as superintendents of schools for the old successful practitioners; and the changing of school supervision from a temporary or a political job, for which little or no preparation need be made, to that of a highly skilled piece of social engineering.

THE TESTS EMPLOYED IN COLUMBIA.

In Columbia no attempt was made to measure the quality of the penmanship, for the schools were in process of changing their system of handwriting to that known as the Palmer system, a system which has met with favor in many places where it has been introduced. In changing from one system of penmanship to another, the transition period is always a chaotic one, for it means breaking up one set of muscular coordinations and substituting another. Columbia was just at this point; it was felt, therefore, that any comparison with cities wherein no such transition was under way would be unfair; consequently the standardized penmanship test was not employed.

Three tests, however, were used—the Ayres spelling test, the Stone reasoning test in arithmetic, and the Courtis arithmetic test—the latter testing the efficiency of the work of the schools in addition, subtraction, multiplication, and division of integers. These are described in order and the results obtained by each set forth.

ALLOWANCE TO BE MADE FOR UNUSUAL CONDITIONS.

These standardized tests were given at the close of the fall term of school. Unfortunately the term's work was interrupted on two occasions by a shut-down of the schools for a considerable period. In terms of school work the closing of the schools always means a greater interruption to the regular work than the length of the period signifies, for it always takes an appreciable time for classes to get back into their stride. On the other hand, however, the tests have to do chiefly with determining how nearly automatic certain reactions have become; so there ought to be a point somewhere in a child's progress where these reflexes are so well established that interruptions should not affect them too seriously. If interruptions do make a radical difference in measurable results, the fact would seem to argue that the work has not yet reached the requisite efficiency.

Again, it should be pointed out, in many of the cities which have contributed to the development of the standard, these tests, given in Columbia for the first time, have been repeatedly given. A familiarity with the technique and routine of procedure doubtless would have an appreciable effect upon the result and is a factor for which allowance should be made.

A. THE SPELLING TEST.

Spelling as a differentiated subject in the Columbia schools is begun in the second grade and continued throughout the seventh. In the second and third grades 150 minutes per week are given to it, 100 minutes in each of the fourth and fifth grades, and 80 minutes in the sixth and seventh.

Class lists of words misspelled by the pupils are prepared by the teacher, and the pupil is encouraged to watch his own work and list the words which he commonly misspells. These are used to supplement the assignments of words taken from the regular spelling text. The instructions issued to the teachers by the elementary supervisor concerning the teaching of spelling are commendable.

PERTINENT QUESTIONS TO THE TEACHER OF SPELLING.

Under this caption the supervisor has asked the teachers a series of searching questions which are well worth repeating and emphasizing. The list follows:

1. Are you in any persistent and systematic way following up the work taught by investigations of various kinds to test the ability of the pupils to spell these words? This question might be analyzed and stated more specifically, as: (*a*) How many different words have you taught this term? (*b*) Do you have the words already taught checked or listed, so that you can give the pupils a test, including all or a random selection of the words taught up to date? (*c*) How do you use the results of this test in order that the pupils may derive the most benefit? (*d*) Is the nature of the test such as to prove the pupils' knowledge of the meaning of the words as well as their ability to remember the order of the letters?

2. In dictating words, whether daily, weekly, or monthly, to what extent do you require their use in sentences?

3. Do you agree that the real and final test of ability to spell is found in spontaneous written composition? If so, to what extent do you use this test systematically? In other words, how many of the words taught are the pupils using intelligently in their original compositions, when the expression of thought is uppermost in their mind? Can you devise some means of applying such a test without consuming an undue amount of time and energy? Would it be practical for the teacher or pupils to keep an alphabetical list of all words taught, for the purpose of checking up all of the misspelled words in a set of compositions occasionally? If this idea, or some modification of it, could be employed to test the use of all words taught, would it not show (*a*) the words not used at all and (*b*) the words accurately and intelligently used?

4. Do you quite frequently inspect the personal list of the pupils to ascertain whether or not they are actually being used? Do you ever compare the personal lists of individual pupils with their compositions for the purpose of learning—(*a*) Has the pupil studied his list? (*b*) How many words are accurately used in the composition and included in the list? (*c*) How many are inaccurately used and in the list? (*d*) To what extent is the pupil recording misspelled words? Would not a custom of this kind be very helpful, especially with poor spellers?

5. Is most of the time spent on this subject used for teaching or testing? Do the pupils feel that it is a time for thought or for drill?

THE TEST DESCRIBED.

The test which was given from the second grade to the eighth, inclusive, consisted of the words for each grade taken from Ayres List B, of "One Thousand Commonest Words."[1] The words in each list have been spelled correctly by 73 per cent of the children in the respective grades in tests which have been given in many cities. Therefore 73 per cent may be accepted as the standard for each grade in Columbia, if the teaching of spelling is to be adjudged equal to the average of many cities of the United States. The six tests which were used follow:

Second grade.	*Third grade.*	*Fourth grade.*	*Fifth grade.*
1. nine	1. catch	1. eight	1. sometimes
2. got	2. able	2. aboard	2. period
3. spring	3. fell	3. restrain	3. firm
4. stone	4. soap	4. population	4. crowd
5. fall	5. express	5. figure	5. relative
6. put	6. table	6. everything	6. serve
7. Monday	7. road	7. farther	7. due
8. take	8. power	8. knew	8. ledge
9. its	9. another	9. fact	9. information
10. sold	10. church	10. public	10. present

Sixth grade.	*Seventh grade.*	*Eighth grade.*
1. often	1. meant	1. organization
2. total	2. distinguish	2. emergency
3. examination	3. assure	3. appreciate
4. marriage	4. probably	4. sincerely
5. opinion	5. responsible	5. athletic
6. witness	6. difficulty	6. extreme
7. theater	7. develop	7. practical
8. supply	8. material	8. proceed
9. course	9. senate	9. cordially
10. doubt	10. agreement	10. character

Result of spelling test in white schools.

Schools and grades.	Boys.	Words correct.	Per cent correct.	Girls.	Words correct.	Per cent correct.	Total pupils.	Total words correct.	Per cent correct.
Blossom Street School:									
Grade II	23	181	78.7	27	233	86.2	50	414	82.8
Grade III	13	74	56.9	18	151	83.8	31	225	72.5
Grade IV	13	72	55.3	18	110	61.1	31	182	58.7
Grade V	6	52	86.6	18	134	74.4	24	186	77.5
Grade VI	5	35	70.0	4	35	87.5	9	70	77.7
Total	60	414	69.0	85	663	78.0	145	1,077	74.3
Granby School:									
Grade II	3	27	90.0	9	72	80.0	12	99	82.5
Grade III	7	60	85.7	4	31	77.5	11	91	82.7
Total	10	87	87.0	13	103	79.2	23	190	82.6

[1] Ayres, L. P. A Measuring Scale for Ability in Spelling. Russell Sage Foundation, New York, 1915.

Result of spelling test in white schools—Continued.

Schools and grades.	Boys.	Words correct.	Per cent correct.	Girls.	Words correct.	Per cent correct.	Total pupils.	Total words correct.	Per cent correct.
Logan School:									
Grade II	53	385	72.6	63	529	84.0	116	914	78.6
Grade III	81	559	69.0	66	534	81.0	147	1,093	74.3
Grade IV	58	374	65.0	62	464	75.0	120	838	69.8
Grade V	42	303	72.0	48	368	77.0	90	671	74.5
Grade VI	29	216	74.0	41	341	83.0	70	557	79.5
Grade VII	29	187	65.0	36	287	80.0	65	474	72.9
Total	292	2,024	69.0	316	2,523	80.0	608	4,547	74.7
McMaster School:									
Grade II	36	217	60.0	51	331	64.9	87	548	63.0
Grade III	45	314	69.7	37	256	69.2	82	570	69.5
Grade IV	40	277	69.2	37	255	68.9	77	532	69.0
Grade V	33	258	78.1	35	278	79.4	68	536	78.8
Grade VI	39	280	71.8	25	192	71.8	64	472	73.7
Grade VII	28	201	71.8	28	209	74.4	56	410	73.2
Total	221	1,547	70.0	213	1,521	71.4	434	3,068	70.7
Shandon School:									
Grade II	14	118	84.0	16	117	73.0	30	235	78.3
Grade III	27	191	71.0	18	141	78.0	45	332	73.7
Grade IV	26	193	74.0	21	148	70.0	47	341	72.5
Grade V	15	123	82.0	13	90	69.0	28	213	76.0
Grade VI	10	75	75.0	15	129	86.0	25	204	81.6
Grade VII	9	67	74.0	11	98	89.0	20	165	82.5
Total	101	767	76.0	94	723	77.0	195	1,490	76.4
Taylor School:									
Grade II	37	221	59.0	38	286	75.0	75	507	67.6
Grade III	31	216	69.0	28	192	68.0	59	408	69.1
Grade IV	37	253	68.0	39	275	70.0	76	528	69.4
Grade V	26	196	75.0	33	269	81.0	59	465	78.7
Grade VI	22	167	76.0	28	235	84.0	50	402	80.0
Grade VII	9	71	78.0	22	158	71.0	31	229	74.2
Total	162	1,124	69.0	188	1,415	75.0	350	2,539	72.5
Waverley School:									
Grade II	15	76	63.0	17	126	73.0	32	202	63.1
Grade III	11	71	64.0	21	175	83.0	32	246	76.8
Grade IV	21	144	69.0	10	85	85.0	31	229	73.8
Grade V	8	52	65.0	13	83	64.0	21	135	64.3
Grade VI	6	38	63.0	4	25	63.0	10	63	63.0
Grade VII	11	74	67.0	9	54	60.0	20	128	64.0
Total	72	455	63.0	74	548	74.0	146	1,003	68.7
High School:									
Grade VIII	103	661	64.2	107	745	69.6	210	1,406	66.9
Total for all	1,021	7,079	69.3	1,090	8,241	75.6	2,111	15,320	72.5

Result of spelling test in negro schools.

Schools and grades.	Boys.	Words correct.	Per cent correct.	Girls.	Words correct.	Per cent correct.	Total pupils.	Total words correct.	Per cent correct.
Booker T. Washington School:									
Grade II	32	222	69	81	567	70	113	789	69.8
Grade III	42	285	68	48	322	67	90	607	67.4
Grade IV	25	171	68	43	308	72	68	470	69.1
Grade V	10	69	69	28	218	78	38	287	75.5
Grade VI	11	68	65	25	189	76	36	257	71.4
Grade VII	3	21	70	12	89	74	15	110	73.3
Total	123	836	68	237	1,693	71	360	2,529	70.2

Result of spelling test in negro schools—Continued.

Schools and grades.	Boys.	Words correct.	Per cent correct.	Girls.	Words correct.	Per cent correct.	Total pupils.	Total words correct.	Per cent correct.
Howard School:									
Grade II	50	224	45	45	300	67	95	524	55.1
Grade III	61	220	36	72	393	55	133	613	46.0
Grade IV	30	233	78	56	408	73	86	641	74.5
Grade V	28	74	26	58	256	44	86	330	38.3
Grade VI	14	106	76	30	174	58	44	280	63.6
Grade VII	10	59	59	38	193	51	48	252	52.5
Grade VIII	13	78	60	47	323	69	60	401	66.8
Total	206	994	48	346	2,047	59	552	3,041	55.0
Total for all	329	1,830	58	583	3,740	65	912	5,570	61.0

Summary of spelling test, distributed by grades.

Grades.	White schools.							Negro schools.		All white schools.	All negro schools.	The entire system.
	Blossom Street.	Granby.	Logan.	McMaster	Shandon.	Taylor.	Waverley.	Booker T. Washington.	Howard.			
Second grade	82.8	82.5	79.6	63.0	78.3	67.6	63.1	69.8	55.1	72.6	63.1	69.3
Third grade	72.5	82.7	74.3	69.5	73.7	69.1	76.8	67.4	46.0	72.8	54.7	66.4
Fourth grade	58.7	.....	69.8	69.0	72.5	69.4	73.8	69.1	74.5	69.3	72.1	70.1
Fifth grade	77.5	.....	74.5	78.8	76.0	78.7	64.3	75.5	38.3	76.0	49.7	68.1
Sixth grade	77.7	.....	79.5	73.7	81.6	80.0	63.0	71.4	63.6	77.5	67.1	74.8
Seventh grade	.....	.....	72.9	73.2	82.5	74.0	64.0	73.3	52.5	73.7	57.4	69.3
Eighth grade	.....	.....	.....	.....	.....	.....	.....	.....	66.8	66.9	66.8	66.9
All grades	74.3	82.6	74.7	70.7	76.4	72.5	68.7	70.2	55.0	72.5	61.0	69.1

OBSERVATIONS ON THE SPELLING TEST.

In giving the test, taking the system as a whole, 30,230 words were dictated, of which number 20,890, or 69.1 per cent, were spelled correctly. Taking the average of 73 per cent correct among the cities where the test has been given under the same conditions as a standard, it is seen that for the entire system Columbia fell short by nearly 4 points. The averages of several of the schools, however, passed the standard; the Blossom Street, Granby, Logan, and Shandon Schools, for example. The Taylor almost reached the standard, while the McMaster, the Waverley, the eighth grade in the high school, and both of the negro schools fell below, one of the latter, the Howard, being so low as to suggest the need of a radical overhauling of the work of the school.

All of the white schools, regarded as a group, reached 72.5 per cent of accuracy; whereas the negro schools fell below the score made by the white children by 11 points. Here again, however, the Howard School brings down the negro rating seriously. The Booker T. Washington School, indeed, as compared with other schools of the

system, stands well, having a 70 per cent rating for all grades taken together. This places it in the same scholarship group with the Waverley School, the McMaster School, and the eighth grade of the high school.

As to the grades taken separately, but for the system as a whole, only one reached the standard average of 73 per cent, the sixth grade, though, if the white children be separated from the negroes, the scores of the fifth, sixth, and seventh grades are seen to have passed this standard, while the second and third grades are but a fraction lower. In one school, the Shandon, every grade reached or passed the standard. Among the white children the lowest score was made by the eighth grade, it having an accuracy rating of 66.9 per cent, being 3 points below the next lowest grade and nearly 6 points below the average of the white schools.

A comparison between the boys and girls of the system as to relative standing is interesting. Among the white schools of the city 10,210 words were dictated to the boys, and 7,079 were spelled correctly, or 69.3 per cent. To the girls were dictated 10,900 words, and 8,241 were spelled correctly, or 75.6 per cent. The white boys fell short of the standard, then, by 3.7 per cent, whereas the girls passed the standard by almost as many points. In but one school, the Granby, did the boys excel the girls. It is notable that with but one exception in all of the white schools the girls exceeded the standard score, whereas the boys fell short in all but two schools. In the negro schools the girls likewise outranked the boys, though neither reached the standard score of 73 per cent correct in either of the schools.

The showing made in this test is very creditable; however, inasmuch as a school department should ever strive to better its work, it is suggested that this can be accomplished, judging by the results of the test, by giving special attention to the work of the following grades:

Blossom Street School	Third and fourth grades.
Logan School	Fourth grade.
McMaster School	Second, third, and fourth grades.
Taylor School	Second, third, and fourth grades.
Waverley School	Second, fifth, sixth, and seventh grades.
High School	Eighth grade.
Booker T. Washington School (negro)	Second, third, fourth, and sixth grades.
Howard School (negro)	All grades except the fourth.

The range of variation as between the lowest and highest scores gained by each grade in the system is large, indicating that the spelling work of the system is in need of coordination. In the second grade, the white schools alone considered, this variation is 20 points; in the third grade, 4 points; in the fourth and fifth grades, 15 points each; and in the sixth and seventh grades, 18 points each. Were the efficiency of the work in the grades which are listed as being in need

of special attention brought up to the suggested standard, this wide variation in results would be eliminated.

Within the limits, too, of each school the range of variation is nearly as great, showing that each school, taken as a unit, is in need of closer supervision. For example, the variation between the highest and lowest grade scores in the Blossom Street School is 24 points; in the Granby the two classes are together in their rating; in the Logan the range is 10 points; in the McMaster, 16 points; in the Shandon, 10 points; in the Taylor, 12 points; and in the Waverley, 13 points. Of course, were the grades broken up into class units in every instance, the range of variation would be considerably increased. With close supervision, however, it will not be difficult to eliminate this variation by raising the grades which are weakest nearer to the standard score.

B. THE COURTIS ARITHMETIC TEST.

The most widely used test for judging of the efficiency of schools and classes in the operations of addition, subtraction, multiplication, and division with integers is that devised by Dr. S. A. Courtis, of Detroit. By testing thousands of children of all grades and in all types of schools throughout the country, he has formulated a standard of attainment in both speed and accuracy by which other schools can be rated.

The series consists of four tests printed on a four-page folder, one test to each page. Twenty-four examples of equal difficulty are given in each. A time limit is set for each test, 8 minutes for the addition test, 4 minutes for the subtraction, 6 minutes for the multiplication, and 8 minutes for the division test. Within these respective time limits each pupil tested is required to solve as many examples as he can. The papers are then marked for the number attempted (speed) and for the number which are correct (accuracy). In order that all tests may be standardized, no credit is given for examples incomplete or partially correct. The following are sample exercises of the four tests, the remaining examples of each are of equal difficulty:

Test No. 1. Addition (8 minutes).

927	297	136	486	384	176	277	837
379	925	340	765	477	783	445	882
756	473	988	524	881	697	682	959
887	983	396	140	266	200	594	608
924	315	353	812	679	366	481	118
110	661	904	466	241	851	778	781
854	794	547	355	796	535	849	756
965	177	192	884	850	323	157	222
344	124	439	567	733	229	953	525

Test No. 2. Subtraction (4 minutes).

115364741	67298125	92057352	113380936
80195261	29346861	42689037	42556840

Test No. 3. Multiplication (6 minutes).

3876	9245	7368	2594	6495
93	86	74	25	19

Test No. 4. Division (8 minutes).

37)14467	86)60372	94)67774	25)9750

THE RESULTS OF THE TEST IN COLUMBIA.

The test was given in Columbia early in 1918 to pupils of the fifth, sixth, seventh, and eighth grades, who were just completing the first semester's work of the schools. In all, 1,229 pupils, 897 white and 332 negro, were tested. The tables which follow show the number of attempts which were made by each grade. Instead of giving the average number of attempts made by the pupils of each class, the median number is given. The median, it should be explained, is the middle point in a series or the point above which there are just as many as there are below it. Thus, for example, if five pupils work, respectively, 3, 5, 6, 9, and 11 problems, the median number worked would be that number which was solved by the pupil who stood at the middle point of the series, i. e., at 6. This is a better way of expressing the "central tendency" of the group than through the use of the average or arithmetical mean and is employed now in statistical work much more frequently.

THE RATE OF SPEED.

These tables show how the pupils divide up in the number of examples which were attempted. For example, in the addition test of the eighth grade of the white schools, 4 pupils attempted 3 examples each, 14 attempted to work 4 each, 18 pupils attempted 5 each, etc. The "central tendency" of the class as a whole, called the "median," was 8.1 examples attempted. The results in all four tests are shown for white children and negro children grouped separately and for the two grouped together, which gives, for purposes of comparison, the accomplishment of the system as a whole as to speed.

Addition attempts (time, 8 minutes).

Grades.	Total papers.	Attempts.																			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	18	19	24	Median.
White:																					
VIII	204	...	...	4	14	18	29	32	45	28	13	7	1	5	5	...	...	1	1	1	8.1
VII	194	...	...	1	6	24	32	30	41	25	13	6	6	6	...	2	1	...	1	...	8.01
VI	217	1	1	5	14	25	43	50	31	25	9	5	4	1	2	1	...	...	...	...	7.4
V	282	...	1	15	33	63	68	59	22	14	5	...	...	...	2	...	...	...	...	...	6.4
Negro:																					
VIII	58	...	...	3	10	15	12	10	3	3	2	...	...	...	...	...	...	...	...	...	6.01
VII	66	...	3	6	12	13	13	8	6	3	...	1	1	...	...	...	...	...	...	...	5.9
VI	80	...	3	11	23	14	16	5	4	3	1	...	...	...	...	...	...	...	...	...	5.2
V	128	2	11	26	40	25	12	7	5	...	...	...	...	...	...	...	...	...	...	...	4.6
White and negro:																					
VIII	262	...	...	7	24	33	41	42	48	31	15	7	1	5	5	...	...	1	1	1	7.6
VII	260	...	3	7	18	37	45	38	47	28	13	7	7	6	...	2	1	1	...	...	7.5
VI	297	1	4	16	37	39	59	55	35	28	10	5	4	1	2	1	...	...	...	...	6.8
V	410	2	12	41	73	88	80	66	27	14	5	...	...	...	2	...	...	...	...	...	5.8

Subtraction attempts (time, 4 minutes).

Grades.	Total pupils.	Attempts.																						
		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	23	24	Median.
White:																								
VIII	204	...	...	1	1	...	8	22	19	33	20	25	24	13	11	12	7	3	1	...	3	...	1	9.9
VII	194	...	...	...	1	1	5	12	25	32	30	28	18	16	10	5	5	2	3	1	...	...	...	9.8
VI	217	1	...	...	1	1	13	20	22	47	32	26	21	21	8	...	1	1	...	1	...	1	...	9.0
V	282	...	...	3	6	23	33	54	49	52	30	16	8	4	3	1	...	...	...	...	...	...	...	7.4
Negro:																								
VIII	58	...	1	1	2	1	4	12	3	8	6	9	5	3	...	2	...	1	...	...	...	...	...	8.6
VII	66	...	3	2	...	5	4	5	4	13	10	6	1	8	...	3	...	1	...	1	...	...	...	8.7
VI	80	...	1	3	4	10	16	20	12	8	...	2	2	1	...	1	...	...	...	...	...	...	...	6.3
V	128	1	2	...	27	19	19	19	17	10	4	6	2	...	1	1	...	...	...	...	...	...	...	5.8
White and negro:																								
VIII	262	...	1	2	3	1	12	34	22	41	26	34	29	16	11	14	7	4	1	...	3	...	1	9.6
VII	260	...	3	2	1	6	9	17	29	45	40	34	19	24	10	8	5	3	3	2	...	...	...	9.4
VI	297	1	1	3	5	11	29	40	34	55	32	28	23	22	8	1	1	1	1	...	...	1	...	8.3
V	410	1	2	30	25	42	52	71	59	56	36	18	8	5	4	1	...	...	...	...	...	...	...	6.7

Multiplication attempts (time, 6 minutes).

Grades.	Total pupils.	Attempts.																					Median.
		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	19	
White:																					
VIII	204	...	1	...	7	10	17	44	30	36	25	13	8	3	2	4	...	2	1	1	7.8
VII	194	...	...	1	3	6	16	21	38	36	32	14	15	3	3	3	2	...	1	...	8.3
VI	217	...	...	1	11	12	45	47	47	18	17	8	8	1	2	...	...	...	...	...	6.8
V	282	1	1	2	14	30	80	75	39	21	11	5	2	1	...	...	...	...	...	...	6.2
Negro:																					
VIII	58	...	...	4	7	9	11	18	6	...	2	1	...	...	...	...	...	...	...	...	5.8
VII	66	...	2	1	6	10	15	17	3	5	4	1	2	...	...	...	...	...	...	...	5.9
VI	80	...	5	10	14	19	11	10	6	1	2	...	2	...	...	...	...	...	...	...	4.3
V	128	3	11	39	32	18	12	5	5	2	1	...	...	...	...	...	...	...	...	...	3.3
White and negro:																					
VIII	262	...	1	4	14	19	28	62	36	36	27	14	8	3	2	4	...	2	1	1	7.0
VII	260	...	2	2	9	16	31	38	41	41	36	15	17	3	3	3	2	...	1	...	7.8
VI	297	...	5	11	25	31	56	57	53	19	19	8	8	3	2	...	...	...	...	...	6.4
V	410	4	12	41	46	48	92	80	44	23	12	5	2	1	...	...	...	...	...	...	5.6

Division attempts (time, 8 minutes).

Grades.	Total pupils.	Attempts.																			
		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	19	20	Median.
White:																					
VIII	204	...	...	2	8	21	30	34	27	32	13	18	7	6	3	...	1	1	1	...	7.2
VII	194	...	1	...	6	18	39	26	19	24	19	22	8	9	1	1	1	...	...	...	7.4
VI	217	...	2	5	35	41	47	30	19	13	9	6	5	1	1	1	...	...	...	...	5.5
V	282	...	2	16	50	72	72	38	11	11	10	2	2	1	...	...	...	...	...	...	5.0
Negro:																					
VIII	58	1	1	3	11	15	12	4	4	1	3	3	...	...	...	...	...	...	...	...	4.5
VII	66	2	7	9	8	15	10	9	...	4	1	1	...	...	...	...	...	...	...	...	4.5
VI	80	...	3	19	18	9	20	4	...	2	3	1	...	1	...	...	...	...	...	...	4.0
V	128	...	8	42	45	16	12	4	...	...	...	...	...	...	...	...	...	...	...	...	3.3
White and negro:																					
VIII	262	1	1	5	19	36	42	38	31	33	16	21	7	6	3	...	1	1	1	...	6.7
VII	260	2	8	8	14	33	49	35	19	28	20	23	8	9	2	1	1	...	...	...	6.5
VI	297	3	21	22	44	61	51	30	21	16	10	8	6	1	1	1	...	...	...	...	4.9
V	410	8	45	61	66	84	76	38	11	11	10	2	2	1	...	...	...	...	...	...	4.3

THE DEGREE OF ACCURACY.

Obviously the number of problems attempted gives no clue to the degree of accuracy; and this alone, then, is not a fair test of the efficiency of the work of a system, for educationally it is better to attempt fewer examples and do them correctly than to try a great many but to have a low score in accuracy. To judge fairly, then, of the work, the degree of accuracy with which the work is done must also be taken into account. The following tables show the degree of accuracy attained by the several grades in the four tests. In the addition test, for example, of 204 white children in the eighth grade 49 of them did not work correctly more than 49 per cent of the problems which they attempted; 40 fell within a range of 50 to 60 per cent right; 32 attained a range of from 60 to 70 per cent right; while the "central tendency" of the class is 64 per cent correct.

Addition test—Percentage of accuracy.

Grades.	Total papers.	0-49 per cent correct.	50 per cent correct.	60 per cent correct.	70 per cent correct.	80 per cent correct.	90 per cent correct.	100 per cent correct.	Median accuracy.
White:									
VIII	204	49	40	32	28	33	2	20	64.0
VII	194	41	30	24	31	42	3	14	67.0
VI	217	53	42	37	29	25	0	31	64.0
V	282	90	45	41	40	35	2	29	61.4
Negro:									
VIII	58	26	9	9	2	6	0	6	53.3
VII	66	25	14	11	4	7	...	5	55.7
VI	80	37	14	11	4	7	1	6	52.1
V	128	75	19	13	6	4	0	11	47.5
White and Negro:									
VIII	262	75	49	41	30	39	2	26	61.7
VII	260	66	53	35	35	49	3	19	63.1
VI	297	90	56	48	33	32	1	37	60.0
V	410	165	64	54	46	39	2	40	56.2

Subtraction test—Percentage of accuracy.

Grades.	Total papers.	0–49 per cent correct.	50 per cent correct.	60 per cent correct.	70 per cent correct.	80 per cent correct.	90 per cent correct.	100 per cent correct.	Median accuracy.
White:									
VIII	204	24	23	37	29	49	13	29	76.2
VII	194	19	12	29	35	45	18	36	80.0
VI	217	33	20	31	36	53	12	32	76.9
V	282	58	38	34	35	61	5	51	73.1
Negro:									
VIII	58	15	11	17	8	7	0	0	61.8
VII	66	22	14	11	9	9	1	0	58.0
VI	80	35	17	11	5	8	1	3	53.0
V	128	37	20	3	6	7	0	5	47.4
White and Negro:									
VIII	262	39	34	54	37	56	13	29	71.0
VII	260	41	26	40	44	54	19	36	75.2
VI	297	68	37	42	41	61	13	35	70.0
V	410	145	58	37	41	68	5	56	60.0

Multiplication test—Percentage of accuracy.

Grades.	Total papers.	0–49 per cent correct.	50 per cent correct.	60 per cent correct.	70 per cent correct.	80 per cent correct.	90 per cent correct.	100 per cent correct.	Median accuracy.
White:									
VIII	204	47	29	51	28	34	2	13	65.1
VII	194	31	21	23	35	54	6	24	76.3
VI	217	45	30	39	29	40	5	29	68.7
V	282	76	36	43	34	51	1	41	66.7
Negro:									
VIII	58	18	14	12	5	6	0	3	58.0
VII	66	33	7	10	6	7	0	3	50.0
VI	80	31	16	14	8	6	0	5	55.6
V	128	90	16	9	4	3	0	6	47.2
White and Negro:									
VIII	262	65	43	63	33	40	2	26	63.6
VII	260	64	28	33	41	61	6	27	71.2
VI	297	76	46	53	37	46	5	34	65.0
V	410	166	52	52	38	54	1	47	57.5

Division test—Percentage of accuracy.

Grades.	Total papers.	0–49 per cent correct.	50 per cent correct.	60 per cent correct.	70 per cent correct.	80 per cent correct.	90 per cent correct.	100 per cent correct.	Median accuracy.
White:									
VIII	204	23	17	22	14	41	4	83	86.3
VII	194	10	8	18	23	55	11	69	86.9
VI	217	19	13	31	28	41	6	79	84.4
V	282	66	39	40	33	41	1	62	69.0
Negro:									
VIII	58	21	5	9	7	7	1	8	63.3
VII	66	27	6	10	3	5	0	15	60.0
VI	80	32	11	6	7	0	0	24	57.2
V	128	101	11	1	1	1	0	13	42.7
White and Negro:									
VIII	262	44	22	31	21	48	5	91	82.7
VII	260	37	14	28	26	60	11	84	84.1
VI	297	51	26	37	35	41	6	103	80.0
V	410	167	50	41	34	42	1	75	57.6

STANDARDS OF COMPARISON.

The foregoing figures mean very little until they are compared and contrasted with recognized standards of achievement. There are at hand data gathered through the use of this test extending over a

period of several years which indicate what other schools are able to do in these fundamental operations of arithmetic. These standards as summarized by Monroe, DeVoss, and Kelly [1] comprise three: (1) General median scores based upon the tabulation of many thousands of individual scores in tests given in 1915–16; (2) the standards proposed by Courtis after three years' use of these tests; (3) the median scores of the Boston system after the use of the test for three years.

The table which follows shows the results of the test in Columbia compared with these standards and also with the results obtained in connection with the survey of the San Francisco schools.

Columbia in comparison.

ADDITION.

Grades.	General standard.		Courtis standard.		Boston.		San Francisco.[1]			Columbia.						
										The system.			Whites.		Negroes.	
	Speed.[2]	Accuracy.[3]	Speed.[2]	Accuracy.	Speed.[2]	Accuracy.	Speed.[2]	Accuracy.	Examples correct.	Speed.[2]	Accuracy.	Examples correct.	Speed.[2]	Accuracy.	Speed.[2]	Accuracy.
VIII.....	11.6	76.0	12	100	12	80	11.9	74.8	8.9	7.6	61.7	4.7	8.1	64.0	6.0	52.3
VII.....	10.9	75.0	11	100	11	80	9.7	69.8	6.8	7.5	63.1	4.7	8.0	67.0	5.9	55.7
VI.....	9.8	73.0	10	100	10	70	10.3	74.1	7.6	6.8	60.0	4.0	7.4	64.0	5.2	52.1
V.....	8.6	70.0	8	100	9	70	8.2	75.3	6.0	5.8	56.2	3.3	6.4	61.4	4.6	47.5

SUBTRACTION.

VIII.....	12.9	87.0	13	100	12	90	13.9	90.9	12.6	9.6	71.0	6.8	9.9	76.2	8.6	61.8
VII.....	11.6	86.0	12	100	11	90	12.5	85.1	10.7	9.4	75.2	7.0	9.8	80.0	8.7	58.0
VI.....	10.3	85.0	11	100	10	90	11.4	84.2	9.6	8.3	70.0	5.8	9.0	76.9	6.3	53.0
V.....	9.0	83.0	9	100	9	80	9.1	82.6	7.5	6.7	60.0	4.0	7.4	73.1	5.8	47.4

MULTIPLICATION.

VIII.....	11.5	81.0	11	100	11	80	10.5	76.0	8.0	7.0	63.6	4.5	7.8	65.1	5.8	58.0
VII.....	10.2	80.0	10	100	10	80	9.1	74.0	6.7	7.8	71.2	5.6	8.3	76.3	5.9	58.0
VI.....	9.1	78.0	9	100	9	80	8.8	78.7	6.9	6.4	65.0	4.2	6.8	68.7	4.3	53.6
V.....	7.5	75.0	8	100	7	70	6.8	66.9	4.5	5.6	57.5	3.2	6.2	66.7	3.3	47.2

DIVISION.

VIII.....	10.7	91.0	11	100	11	90	9.6	89.2	8.6	6.7	82.7	5.5	7.2	86.3	4.5	63.3
VII.....	9.6	90.0	10	100	10	90	8.1	80.3	6.5	6.5	84.1	5.5	7.4	86.9	4.5	60.0
VI.....	8.2	87.0	8	100	8	80	7.6	74.7	5.7	4.9	80.0	3.9	5.5	84.4	4.0	57.2
V.....	6.1	77.0	6	100	6	70	4.7	57.0	2.7	4.3	57.6	2.5	5.0	69.0	3.3	43.7

[1] From the San Francisco survey.
[2] Speed is the number of examples attempted in the prescribed time.
[3] Accuracy is the per cent of examples correct.

OBSERVATIONS ON THE COURTIS TEST.

It will be easier to understand Columbia's showing in this test if the essential facts of the preceding table be arranged somewhat dif-

[1] Monroe, DeVoss, and Kelly. Educational Tests and Measurements, 1917, pp. 38–40.

ferently. In the columns headed "General standard" medians are given which express the results obtained by Courtis himself in testing thousands of children in many school systems in various parts of the country. To compare the results of the test of the Columbia system with this standard the facts may be stated in the following way:

Addition test.

General standard.	*Columbia system.*
The eighth grades attempted 11.6 examples, solving 8.8 examples.	The eighth grades attempted 7.6 examples, solving 4.7 examples.
The seventh grades attempted 10.9 examples, solving 8.1 examples.	The seventh grades attempted 7.5 examples, solving 4.7 examples.
The sixth grades attempted 9.8 examples, solving 7.1 examples.	The sixth grades attempted 6.8 examples, solving 4 examples.
The fifth grades attempted 8.6 examples, solving 6 examples.	The fifth grades attempted 5.8 examples, solving 3.3 examples.

Subtraction test.

The eighth grades attempted 12.9 examples, solving 11.2 examples.	The eighth grades attempted 9.6 examples, solving 6.8 examples.
The seventh grades attempted 11.6 examples, solving 9.9 examples.	The seventh grades attempted 9.4 examples, solving 7 examples.
The sixth grades attempted 10.3 examples, solving 8.8 examples.	The sixth grades attempted 8.3 examples, solving 5.8 examples.
The fifth grades attempted 9 examples, solving 7.4 examples.	The fifth grades attempted 6.7 examples, solving 4 examples.

Multiplication test.

The eighth grades attempted 11.5 examples, solving 9.3 examples.	The eighth grades attempted 7 examples, solving 4.5 examples.
The seventh grades attempted 10.2 examples, solving 8.1 examples.	The seventh grades attempted 7.8 examples, solving 5.6 examples.
The sixth grades attempted 9.1 examples, solving 7 examples.	The sixth grades attempted 6.4 examples, solving 4.2 examples.
The fifth grades attempted 7.5 examples, solving 5.6 examples.	The fifth grades attempted 5.6 examples, solving 3.2 examples.

Division test.

The eighth grades attempted 10.7 examples, solving 9.7 examples.	The eighth grades attempted 6.7 examples, solving 5.5 examples.
The seventh grades attempted 9.6 examples, solving 8.6 examples.	The seventh grades attempted 6.5 examples, solving 5.5 examples.
The sixth grades attempted 8.2 examples, solving 7.1 examples.	The sixth grades attempted 4.9 examples, solving 3.9 examples.
The fifth grades attempted 6.1 examples, solving 4.7 examples.	The fifth grades attempted 4.3 examples, solving 2.5 examples.

This test has not before been given officially in any city having as large a negro population as has Columbia. Consequently it is not possible to estimate with any degree of accuracy how far this factor operates in affecting the ranking of the city in comparison with other cities. The city of Butte, Mont., comes as near being comparable to Columbia in size and in general character as any city where the results of the test are of record. When the test was given in Butte the city had a population somewhat in excess of 40,000. While 70 per cent of the population was white, it was made up of the foreign born and

those of direct foreign descent. While the characteristics of the respective populations of the two cities are totally different, they are alike in that they both introduce elements of difficulty in school work. A comparison of the results of the test in the two places will be of interest, though it would scarcely be fair to either city to consider the comparison too seriously.

The records of the Butte test do not give the number of problems attempted; so a comparison can be made on the basis only of the number which were correctly solved. This comparison, expressed in terms of the median score of each grade, follows:

Comparison with the Butte system in examples correctly finished.

	Addition test.		Subtraction test.		Multiplication test.		Division test.	
	Butte.	Columbia.	Butte.	Columbia.	Butte.	Columbia.	Butte.	Columbia.
VIII	5.3	4.7	9.8	6.8	8.1	4.5	10.2	5.5
VII	3.8	4.7	7.1	7.0	6.5	5.6	7.2	5.5
VI	3.4	4.0	5.8	5.8	5.0	4.2	4.3	2.9
V	2.9	3.3	5.5	4.0	4.1	3.2	3.6	2.5

To show where the weakest spots of the Columbia system are, as shown by the Courtis test, a table setting forth the standing made by the several schools of the system follows:

Columbia schools compared.

ADDITION.

Grades.	Examples.	White schools.							Negro schools.	
		Blossom Street.	Logan.	McMaster.	Shandon.	Taylor.	Waverley.	High School.	Booker T. Washington.	Howard.
VIII	Examples attempted	.....	.....	.....	.....	.....	.....	8.1	.....	5.9
	Percentage correct	.....	.....	.....	.....	.....	.....	64.0	.....	53.0
VII	Examples attempted	.....	8.3	8.1	7.3	8.4	6.9	.....	4.9	6.3
	Percentage correct	.....	66.8	66.8	65.0	67.0	75.0	.....	55.0	54.0
VI	Examples attempted	7.5	7.1	7.4	6.3	8.4	6.7	.....	4.9	5.4
	Percentage correct	52.5	70.0	62.7	56.4	67.5	55.0	.....	61.6	58.0
V	Examples attempted	5.5	6.4	7.0	5.8	6.5	6.6	.....	4.0	4.9
	Percentage correct	64.0	58.7	66.8	59.0	66.0	37.7	.....	42.7	41.6

SUBTRACTION.

VIII	Examples attempted	.....	.....	.....	.....	.....	.....	9.9	.....	5.4
	Percentage correct	.....	.....	.....	.....	.....	.....	76.2	.....	57.3
VII	Examples attempted	.....	10.1	9.4	9.7	8.9	10.9	.....	5.3	9.1
	Percentage correct	.....	75.3	82.6	76.2	93.0	76.0	.....	53.3	58.1
VI	Examples attempted	8.3	9.6	9.0	9.0	9.1	8.0	.....	9.9	6.6
	Percentage correct	75.0	81.0	80.0	81.0	68.1	65.0	.....	53.7	52.3
V	Examples attempted	5.6	8.0	7.1	6.7	8.0	7.9	.....	3.1	5.4
	Percentage correct	67.5	77.3	74.0	66.4	78.3	50.0	.....	32.0	38.0

MULTIPLICATION.

VIII	Examples attempted	.....	.....	.....	.....	.....	.....	7.8	.....	5.8
	Percentage correct	.....	.....	.....	.....	.....	.....	65.1	.....	56.1
VII	Examples attempted	.....	8.5	7.6	7.9	9.1	8.2	.....	5.3	6.0
	Percentage correct	.....	73.7	74.3	78.7	81.3	73.3	.....	43.6	50.0
VI	Examples attempted	6.3	6.8	6.4	7.0	7.5	5.5	.....	4.3	5.0
	Percentage correct	49.0	70.0	68.5	68.3	68.7	57.5	.....	52.5	58.7
V	Examples attempted	5.0	6.2	6.3	5.4	6.7	5.8	.....	3.1	3.4
	Percentage correct	79.9	64.4	77.2	61.0	67.0	37.7	.....	44.3	33.0

DIVISION.

VIII	Examples attempted	.....	.....	.....	.....	.....	.....	7.2	.....	4.8
	Percentage correct	.....	.....	.....	.....	.....	.....	86.3	.....	63.3
VII	Examples attempted	.....	6.9	6.7	8.1	9.7	6.8	.....	3.9	4.6
	Percentage correct	.....	89.1	80.9	86.1	100.0	88.3	.....	43.6	63.0
VI	Examples attempted	4.6	5.9	5.3	7.5	5.0	4.2	.....	3.2	5.0
	Percentage correct	85.0	85.9	82.5	91.0	80.0	68.3	.....	52.8	51.5
V	Examples attempted	4.2	4.7	4.7	4.5	6.2	4.5	.....	1.7	2.5
	Percentage correct	68.0	71.5	60.0	65.0	70.0	37.7	.....	35.0	30.7

Granting to principals the time and the authority to supervise the work of their schools and holding them responsible for results; initiating frequent comparative tests given from time to time by the superintendent and supervisors to find out how the work is going; devising a methodology for dealing effectively with the drill phases of school work; and constructive supervision intelligently exercised, will operate to lift this branch of the work of Columbia's system speedily to a worthy place among the schools and cities whose attainments afford a reasonable standard for all.

C. THE REASONING TEST IN ARITHMETIC.

No very satisfactory tests for measuring the ability of pupils to solve problems involving reasoning have been devised. The most widely used is that worked out by Stone.[1] Stone himself used it in testing the 6 A grades of 26 cities. It has been used also in a number of city school surveys; so that results gotten in many places are of record, affording fairly definite standards of what is to be expected from its use. The test contains 12 problems graduated in difficulty and having a varying credit value dependent upon their difficulty. The time allowance for the test is exactly 15 minutes.

While Stone's plan for marking the papers allows credit for examples partly right and for examples which are not completed, nevertheless, in order that conditions under which the papers are marked may not be subject to variation due to the variation in the values which different examiners would give such papers, it has been the practice in most recent surveys to allow no credit for problems which are only partly correct or which are incomplete. Thus, for example, in the Butte (Mont.) survey, in the survey of the schools of Salt Lake City, in the survey of the schools of San Francisco, and in

[1] Stone, C. W. Standardized Reasoning Tests in Arithmetic. Teachers College, Columbia University. 1916.

that of the schools of Janesville, Wis., in each of which the Stone test was used, the problems were marked on the basis only of right or wrong answers. In order that Columbia might be compared with these cities in the results obtained, this method of marking was employed.

The test, with the value given to each problem, follows:

THE STONE REASONING TEST.

(Solve as many of the following problems as you have time for; work them in order as numbered.)

1. If you buy 2 tablets at 7 cents each and a book for 65 cents, how much change should you receive from a two-dollar bill? (1.0.)

2. John sold 4 Saturday Evening Posts at 5 cents each. He kept one-half the money and with the other half he bought Sunday papers at 2 cents each. How many did he buy? (1.0.)

3. If James had 4 times as much money as George, he would have $16. How much money has George? (1.0.)

4. How many pencils can you buy for 50 cents at the rate of 2 for 5 cents? (1.0.)

5. The uniforms for a baseball nine cost $2.50 each. The shoes cost $2 a pair. What was the total cost of uniforms and shoes for the nine? (1.0.)

6. In the schools of a certain city there are 2,200 pupils; one-half are in the primary grade, one-fourth in the grammar grades, one-eighth in the high school, and the rest in the night school. How many pupils are there in the night school? (1.4.)

7. If 3½ tons of coal cost $21, what will 5½ tons cost? (1.2.)

8. A news dealer bought some magazines for $1. He sold them for $1.20, gaining 5 cents on each magazine. How many magazines were there? (1.6.)

9. A girl spent one-eighth of her money for car fare, and three times as much for clothes. Half of what she had left was 80 cents. How much money did she have at first? (2.0.)

10. Two girls receive $2.10 for making buttonholes. One makes 42, the other 28. How shall they divide the money? (2.0.)

11. Mr. Brown paid one-third of the cost of a building; Mr. Johnson paid one-half the cost. Mr. Johnson received $500 more annual rent than Mr. Brown. How much did he receive? (2.0.)

12. A freight train left Albany for New York at 6 o'clock. An express train left on the same track at 8 o'clock. It went at the rate of 40 miles an hour. At what time of day will it overtake the freight train if the freight train stops after it has gone 56 miles? (2.0.)

Results of the reasoning test in white schools.

Schools and grades.	Number of pupils.	Total examples attempted.	Total examples right.	Percentage of accuracy.	Total credits.	Average credits per pupil.	Average examples attempted per pupil.	Average examples right per pupil
Blossom Street School:								
Grade V	24	160	76	47.5	78.0	3.2	6.6	3.1
Grade VI	9	57	35	61.4	36.2	4.0	6.3	4.0
Grade VII	.....	.....	.....	.....	.....	.....	.....	.....
Total	33	217	111	51.1	114.2	3.4	6.6	3.3

Results of the reasoning test in white schools—Continued.

Schools and grades.	Number of pupils.	Total examples attempted.	Total examples right.	Percentage of accuracy.	Total credits.	Average credits per pupil.	Average examples attempted per pupil.	Average examples right per pupil.
Logan School:								
Grade V	89	406	275	67.7	294.6	3.3	4.5	3.0
Grade VI	65	489	304	62.1	331.0	5.0	7.5	4.6
Grade VII	67	540	396	73.3	432.0	6.4	8.0	5.9
Total	221	1,435	975	67.9	1,057.6	4.7	6.4	4.4
McMaster School:								
Grade V	68	428	195	45.5	202.4	2.9	6.0	2.8
Grade VI	62	428	297	70.5	317.0	5.1	6.9	4.7
Grade VII	54	444	311	70.0	349.2	6.4	8.2	5.8
Total	184	1,300	703	54.0	868.6	4.7	7.0	3.8
Shandon School:								
Grade V	36	170	89	52.3	90.6	2.5	4.7	2.4
Grade VI	25	176	118	67.0	124.0	5.0	7.0	4.7
Grade VII	20	183	122	66.6	142.8	7.1	9.1	6.1
Total	81	529	329	62.1	357.4	4.4	6.5	4.0
Taylor School:								
Grade V	52	309	175	56.6	178.2	3.4	5.9	3.3
Grade VI	49	358	230	64.2	247.6	5.0	7.3	4.7
Grade VII	33	220	164	74.5	177.6	5.3	6.6	5.0
Total	134	887	569	64.1	603.4	4.5	6.6	4.2
Waverley School:								
Grade V	19	109	48	44.0	48.4	2.5	5.7	2.5
Grade VI	11	70	54	77.1	58.0	5.2	6.3	4.7
Grade VII	20	154	104	67.5	120.0	6.0	7.7	5.2
Total	50	333	206	61.8	226.4	4.5	6.6	4.0
High school:								
Grade VIII	197	1,270	998	78.5	1,075.2	5.4	6.4	5.0
Total for all	900	5,971	3,891	65.1	4,302.8	4.7	6.6	4.3

Results of the reasoning test in negro schools.

Schools and grades.	Number of pupils.	Total examples attempted.	Total examples right.	Percentage of accuracy.	Total credits.	Average credits per pupil.	Average examples attempted per pupil.	Average examples right per pupil.
Booker T. Washington School:								
Grade V	38	124	62	50.0	65.0	1.7	3.2	1.6
Grade VI	35	140	92	65.7	108.5	3.1	4.0	2.6
Grade VII	13	82	57	69.5	59.8	4.6	6.3	4.4
Total	86	346	211	60.9	233.3	2.7	4.0	2.4
Howard School:								
Grade V	86	388	80	20.6	89.0	1.0	4.5	1.0
Grade VI	44	235	99	42.1	101.4	2.3	5.3	2.2
Grade VII	48	251	148	58.9	148.8	3.1	5.2	3.1
Grade VIII	58	266	180	67.6	185.7	3.2	4.6	3.1
Total	236	1,140	516	45.2	524.9	2.2	4.8	2.1
Total for all	322	1,486	727	48.9	758.2	2.3	4.6	2.2

Columbia schools compared in average examples per pupil attempted and right.[1]

Grades.	White schools.							Negro schools.		All white schools.	All negro schools.	The entire system.
	Blossom Street.	Logan.	McMaster.	Shandon.	Taylor.	Waverley.	High School.	Booker T. Washington.	Howard.			
Fifth grade	6.6	4.5	6.0	4.7	5.9	5.7	.....	3.2	4.5	5.4	4.1	5.0
	3.1	3.0	2.8	2.4	3.3	2.5	.....	1.6	1.0	2.9	1.2	2.4
Sixth grade	6.3	7.5	6.9	7.0	7.3	6.3	.....	4.0	5.3	7.1	4.7	6.5
	4.0	4.6	4.7	4.7	4.7	4.7	.....	2.6	2.2	4.7	2.4	4.0
Seventh grade	.....	8.0	8.2	9.1	6.6	7.7	.....	6.3	5.2	7.9	5.4	7.3
	.....	5.9	5.8	6.1	5.0	5.2	.....	4.4	3.1	5.6	3.3	5.1
Eighth grade	.....	.....	.....	.....	.....	.....	6.4	.....	4.6	6.4	4.6	6.0
	.....	.....	.....	.....	.....	.....	5.0	.....	3.1	5.0	5.0	4.6
All grades	6.6	6.4	7.0	6.5	6.6	6.6	6.4	4.0	4.8	6.6	4.6	6.1
	3.3	4.4	3.8	4.0	4.2	4.0	5.0	2.4	2.1	4.3	2.2	3.7

[1] The upper figures show the number attempted; the lower, the number right.

Columbia schools compared in average accuracy.[1]

Grades.	White schools.							Negro schools.		All white schools.	All negro schools.	The entire system.
	Blossom Street.	Logan.	McMaster.	Shandon.	Taylor.	Waverley.	High School.	Booker T. Washington.	Howard.			
Fifth grade	47.5	67.7	45.5	52.3	56.6	44.0	.....	50.0	23.0	54.2	29.5	48.1
Sixth grade	61.4	62.1	70.5	67.0	64.2	77.1	.....	65.7	42.1	65.7	50.9	62.9
Seventh grade	.....	73.3	70.0	66.6	74.5	67.5	.....	69.5	58.9	71.1	61.5	69.4
Eighth grade	.....	.....	.....	.....	.....	.....	78.5	.....	67.6	78.5	67.6	76.6
All grades	51.1	67.9	54.0	62.1	64.1	61.8	78.5	60.9	45.2	65.1	48.9	61.9

[1] Shown by the percentage of attempts which were right.

Columbia schools compared in credits received.[1]

Grades.	White schools.							Negro schools.		All white schools.	All negro schools.	The entire system.
	Blossom Street.	Logan.	McMaster.	Shandon.	Taylor.	Waverley.	High School.	Booker T. Washington.	Howard.			
Fifth grade	3.2	3.3	2.9	2.5	3.4	2.5	.....	1.7	1.0	3.0	1.2	2.5
Sixth grade	4.0	5.0	5.1	5.0	5.0	5.2	.....	3.1	2.3	5.0	2.6	4.4
Seventh grade	.....	6.4	6.4	7.1	5.3	6.0	.....	4.6	3.1	6.3	3.4	5.6
Eighth grade	.....	.....	.....	.....	.....	.....	5.4	.....	3.2	5.4	3.2	4.9
All grades	3.4	4.7	4.7	4.4	4.5	4.5	5.4	2.7	2.2	4.7	2.3	4.1

[1] Grade averages only are given.

Columbia compared with other cities in average credits per pupil.

Cities.	V grades.		VI grades.		VII grades.		VIII grades.	
	Median pupil.	Average per pupil.	Median pupil.	Average per pupil.	Median pupil.	Average per pupil.	Median pupil.	Average per pupil.
Janesville, Wis. (15,000 pop.)	2.40	1.80	3.4	2.93	5.50	5.20	6.3	6.48
Butte, Mont. (40,000 pop.)	2.20	2.44	3.9	4.24	5.80	5.95	7.7	7.83
Salt Lake City	3.70	4.08	6.4	6.46	8.60	8.86	10.5	10.44
San Francisco	2.85	2.40	5.52	4.06	5.40	4.96	6.8	6.43
Columbia:								
White pupils	.....	3.0	.....	5.0	.....	6.3	.....	5.4
Negro pupils	.....	1.2	.....	2.6	.....	3.4	.....	3.2
Both	.....	2.5	.....	4.4	.....	5.6	.....	4.9

OBSERVATIONS ON THE REASONING TEST.

Such a test as this throws light on two important phases of the arithmetic work of the schools, the rate of speed with which children work, and the accuracy of their work. Given the number of pupils in the classes and the number of examples attempted, and the average rate per pupil can easily be found. Given, in addition, the number of examples solved correctly, and the average of accuracy for classes, for grades, for schools, and for the entire system can be determined. The preceding tables show these facts for Columbia.

Based upon his experience in giving this test in 26 representative city school systems, Stone suggests the following as a tentative standard of accomplishment for the several grades:[1]

Of the fifth-grade pupils 80 per cent should reach or exceed 5.5 credits with 75 per cent accuracy.

Of the sixth-grade pupils 80 per cent should reach or exceed 6.5 credits with 80 per cent accuracy.

Of the seventh-grade pupils 80 per cent should reach or exceed 7.5 credits with 85 per cent accuracy.

Of the eighth-grade pupils 80 per cent should reach or exceed 90 per cent accuracy.

Judged by the standard set by Stone, the result of the test in the Columbia schools is disappointing in the credits received, in the number of problems attempted, and in the percentage of accuracy reached by the several grades. While Stone would allow credit for problems partly correct and partly finished, a method of grading not adopted by the committee, for reasons already mentioned, yet it was found in grading the papers that Stone's method would not have increased the averages except in very slight degree.

When, however, Columbia is compared with other cities in which the test has been given, wherein the same method of marking papers was employed, she appears to very much better advantage.

[1] Stone, C. W. Standardized Reasoning Tests in Arithmetic, p. 21.

Considering the score in average credits made by the white children alone, it is seen that the fifth, sixth, and seventh grades of the Columbia schools excel the corresponding grades of all of the cities of the preceding table except those of Salt Lake City. The eighth grade of Columbia, however, is the lowest of the eighth grades in all of the cities of the list. In this connection it should be pointed out that the eighth grade in Columbia is classed as a high-school grade and receives no formal instruction in arithmetic, although work is given in high-school mathematics. In the other cities of the list the eighth grades are in the elementary division of schools and probably receive definite drill in arithmetical processes.

When the Columbia system as a whole is compared with the entire systems of the cities of the list, the relative rank is, of course, not so high, for the poor success with which the negro schools met the test lowers the rating for the city considerably. Even with the negroes included, however, an examination of the preceding table will show that with the exception of the eighth grade all grades of the Columbia schools excelled the corresponding grades of the San Francisco schools.

By making reference to the foregoing tables, especially to those in which the several schools of the system are compared, information can be secured which will show where special work needs to be done in order that the several schools and grades may be brought up to a higher standard of excellence.

VI.—THE HOLDING POWER OF THE SYSTEM COMPARES FAVORABLY WITH THAT OF OTHER SYSTEMS.

Though many children fail to enter school, and, for reasons for which a system can not be held responsible, many withdraw after entering, nevertheless, in general, the drawing power of a given system, and its holding power as well, are legitimate criteria for judging, in part at least, of its efficiency.

THE ACCURACY OF THE COLUMBIA SCHOOL CENSUS.

The Columbia school census, taken in February, 1918, shows that there are, between the ages of 6 and 21, a total of 7,938 children, of whom 4,898 are whites and 3,040 are negroes. Studies show that the ratio which the young people of these ages bear to the entire population is nearly constant among cities of the same general type throughout the country. According to the United States Census for 1910 this ratio in Chicago was 27.2 per cent; in Cleveland, 26.9 per cent; in Detroit, 26.4 per cent; in Pittsburgh, 27.5 per cent; and in St. Louis, 26.4 per cent. Corresponding figures for other cities of the same approximate characteristics and for other censuses run about the same. Thus, for example, Columbia's total population in 1910 was 26,319, while the children of the ages of 5 to 19, inclusive, numbered 7,125, or 27 per cent of the total, practically the same as that of other cities. If this ratio holds good to-day, and no reason is apparent why it should have changed materially during the time which has intervened, then, based on the school census returns, the present population of Columbia would not reach 30,000. The Census Bureau, however, credited Columbia with a population in 1915 of 34,058, determined by a method of estimating the growth of cities, which gives the minimum possibility rather than the maximum. By this same method of estimating growth, Columbia should have a population in 1918 of at least 39,000. If the same ratio between school age and total population holds now, then the school census should show at least 10,500 names, as against 7,938 actually enumerated.

A check on this conclusion can be gotten in this way: In 1910, according to the Federal statistics, 53.2 per cent of the children of Columbia 6 to 20 years of age were in school. In 1917 the total school enrollment reported by the school authorities was 6,104. If the ratio between those in and out of school is the same as in 1910,

the school census should show a total between the ages of 6 and 20 of about 11,500 children. While the proportion of children now in school as compared with those not enrolled may be somewhat greater than in 1910, due to an increased community interest in education, nevertheless, as no attempt has been made to enforce the act providing for compulsory school attendance of all of the ages of 8 to 14, inclusive, it is unlikely that this change in ratio is sufficient to affect the estimate seriously. It would seem, therefore, that had the school census enumerators succeeded in getting the names of all the children the list would have shown that there are now in Columbia at least 10,500 children between the ages of 6 and 21.

Still another check on this estimate of the number of children in Columbia between the ages of 6 and 21 can be employed. The Federal Census of 1910 shows that, of the children in Columbia between the ages of 6 and 14, 74 per cent were attending school, public and private. The 1917 school report of Columbia shows that in the public schools alone there were enrolled in the first eight grades, corresponding to the age period of 6 to 14 years, a total of 5,707 pupils. If the same percentage holds good, then this number is 74 per cent of the actual number of pupils in the city of these ages. That is to say, on the basis of this reasoning there should be about 7,700 pupils in Columbia between the ages of 6 and 14. According to the school census, however, there are only about 5,300, a number which is about one-third short of what should be expected. Furthermore, it must be remembered that there are quite a number of children of these ages in private and parochial schools, which would operate to increase the expectancy rather than decrease it.

But the final reason for thinking that the school census recently taken has fallen short of an enumeration of all of the children lies in the fact that in 1910 the Federal Census credits Columbia, with 7,272 children between the ages of 6 and 20 and 2,570 under 5 years, whereas the school census gives but 7,938 children for the age period of 6 to 21, inclusive, one year longer, and 3,596 for the period below 6; also one year longer than the division made by the Federal Census enumerators. That is, during the time which has elapsed since the Federal Census was taken, eight years, according to the school census there has been an increase, in the one case, of but 666 and of only 1,026 in the other. Part of this apparent increase, too, it must be remembered, is due to the fact that each period compared is one year longer in the case of the local school census. Columbia has surely grown more rapidly during the past eight years than these differences would indicate.

Looking at the matter, then, from all angles, it would seem a conservative conclusion that any discussion of Columbia's school prob-

lems which is based on data secured through the local school census should take into account an increase of about one-third in the totals therein given.

THE SUPERINTENDENT'S OPINION.

Supt. Dreher does not think there is an error in the census in excess of 2 per cent. Speaking of the population of Columbia, he says:

The population of Columbia in round numbers increased from 21,000 to 26,000 in the decade from 1900 to 1910, which shows an annual increase of 500. In the fall of 1915 Dr. S. B. Fishburne, health officer of the city, compiled a census record made out by men who were at work with him and who made house-to-house inspections in connection with their duties, and therefore have had experience in collecting data. Their figures gave 31,000 (exact 30,976) and a school population of 6,196. Here, again, we have an increase of 1,000 a year. During this period, however, Shandon, Waverley, and North Columbia were annexed, which probably accounts for an increase of 500 a year over the decade before.

In view of these figures I am unable to see how our population has increased from 26,000 in 1910 to 40,000 in 1918. My school reports for the past few years are based on 35,000, and my opinion is that this figure is more nearly correct than 40,000, although well-informed men here say that we have 40,000 in the city limits.

In regard to the accuracy of the school census I wish to say that I could scarcely select men who are more capable of making accurate returns than the men who did the work for us in March. Six of them were our own principals and high-school teachers, who were assigned to their own districts where possible; two others had been working in the post office for a number of years and understand clerical details thoroughly; the third was a man who was formerly in the retail furniture business on the installment plan, and therefore went all over the city in connection with his work. Again. this census was not rushed at all in view of the fact that the schools were closed and no pressure was brought upon the men to get through on a definite schedule time. They made return visits time and time again to get the information from homes that were previously unaccounted for. Doubtless some children were overlooked, but I can never bring myself to believe that as many as 3,500 were not enumerated.

A summary of the school census returns distributed as to race, age, sex, and attendance districts follows:

Age distribution of white children in school—School census.

Schools.	Boys.	Girls.	Total.	Ages.																		Total.
				6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	(1)		
Waverley	135	129	264	1	7	31	30	24	20	21	23	32	20	25	9	8	6	5	1	1		264
Shandon	243	279	522	3	20	43	42	53	53	54	47	42	35	45	31	15	10	10	0	19		522
Taylor	293	351	644	0	26	68	52	76	71	54	60	62	47	40	21	21	25	7	4	10		644
Logan	443	482	925	10	53	80	111	117	105	96	95	81	62	43	28	24	11	6	0	3		925
McMaster	431	488	919	14	44	93	97	86	84	86	77	83	68	65	43	32	24	22	1	0		919
Blossom Street	205	264	469	7	32	61	64	48	51	53	34	48	23	21	11	8	2	5	1	0		469
Total	1,750	1,993	3,743	35	182	376	396	404	384	364	336	348	255	239	143	108	78	55	7	33		3,743

[1] Age not known.

Age distribution of white children not in school—School census.

Schools.	Boys.	Girls.	Total.	Ages.																	Total.
				6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	(1)	
Waverley	63	37	100	8	12	2	1	6	4	0	6	3	6	9	12	14	15	12	7	1	100
Shandon	42	32	74	4	3	0	1	2	21	2	0	1	6	2	5	5	5	18	2	3	74
Taylor	111	105	216	7	46	8	3	6	2	1	5	5	9	23	18	22	32	25	5	5	216
Logan	164	167	331	20	34	13	7	7	8	4	9	13	20	40	37	51	24	40	3	1	331
McMaster	124	109	233	17	37	29	9	5	2	5	6	8	6	15	25	33	18	21	6	0	233
Blossom Street	120	81	201	10	23	8	6	4	9	4	6	13	20	24	16	20	10	18	8	2	201
Total	624	531	1,155	66	149	51	27	24	46	16	26	43	55	113	113	145	104	134	31	12	1,155

[1] Age not known.

Age distribution of negro children in school—School census.

Schools.	Boys.	Girls.	Total.	Ages.																	Total.
				6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	(1)	
Waverley	196	298	494	7	38	41	55	58	37	45	45	37	41	39	24	12	8	3	0	4	494
Shandon	7	8	15	0	1	2	0	1	2	2	0	3	0	1	1	0	0	0	0	2	15
Taylor	71	88	159	0	10	14	6	16	16	10	19	27	12	10	9	8	1	0	1	0	159
Logan	170	209	379	20	32	27	49	44	61	32	27	31	24	15	7	6	2	0	0	2	379
McMaster	274	386	660	33	52	74	61	84	86	69	52	58	45	25	8	6	2	2	4	0	660
Blossom Street	230	320	550	9	56	63	60	58	65	58	53	38	32	21	14	10	2	5	1	5	550
Total	948	1,309	2,257	69	189	221	231	261	266	216	196	194	154	111	63	42	15	10	6	13	2,257

[1] Age not known.

Age distribution of negro children not in school—School census.

Schools.	Boys.	Girls.	Total.	Ages.																	Total.
				6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	(1)	
Waverley	64	81	145	1	14	6	3	3	2	2	4	5	8	6	22	18	22	16	12	1	145
Shandon	4	4	8	0	3	0	0	0	0	1	0	0	0	0	1	2	1	0	0	0	8
Taylor	39	31	70	0	4	4	3	6	1	5	6	4	4	6	2	11	5	3	1	5	70
Logan	84	63	147	7	5	4	2	3	2	1	9	9	21	26	15	21	10	11	0	1	147
McMaster	109	114	223	18	17	6	5	6	2	7	16	23	7	30	21	33	6	12	12	2	223
Blossom Street	93	97	190	3	9	6	1	4	2	3	7	13	10	25	26	22	21	30	6	2	190
Total	393	390	783	29	52	26	14	22	9	19	42	54	50	93	87	107	65	72	31	11	783

[1] Age not known.

Summary of the school census (6–21).

	Ages.																	Total.
	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	(1)	
Whites:																		
In school	35	182	376	396	404	384	364	336	348	255	239	143	108	78	55	7	33	3,743
Not in school	66	149	51	27	24	46	16	26	43	55	113	113	145	104	134	31	12	1,155
Total	101	331	427	423	428	430	380	362	391	310	352	256	253	182	189	38	45	4,898
Negroes:																		
In school	69	189	221	231	261	266	216	196	194	154	111	63	42	15	10	6	13	2,257
Not in school	29	52	26	14	22	9	19	42	54	50	93	87	107	65	72	31	11	783
Total	98	241	247	245	283	275	235	238	248	204	204	150	149	80	82	37	24	3,040
Grand total	199	572	674	668	711	705	615	600	639	514	556	406	402	262	271	75	69	7,938

[1] Age not known.

Children under 6 years of age—School census.

Schools.	Whites.			Negroes.		
	Boys.	Girls.	Total.	Boys.	Girls.	Total.
Waverley	92	76	168	136	132	268
Shandon	101	92	193	3	1	4
Taylor	220	222	442	30	32	62
Logan	313	352	665	101	89	190
McMaster	239	242	481	171	164	335
Blossom Street	243	217	460	158	170	328
Total	1,208	1,201	2,409	599	588	1,187

THE COMPULSORY SCHOOL-ATTENDANCE LAW.

In 1876 the Legislature of South Carolina passed a compulsory school-attendance law, applicable only to the city of Columbia and the County of Charleston, which required all persons within these limits to keep their children between 8 and 16 in school. This law was never enforced.

In recent years attempts have been made to get an attendance law passed for the State at large, but all efforts failed until 1915, when the general assembly passed a local-option law, which provides that the attendance of all children between the ages of 8 and 14, inclusive, in those districts adopting the measure, shall be compulsory under penalty of fine and imprisonment and which requires also that boards of trustees of districts adopting the act shall take a school census annually.

Not much interest was taken by the citizens of Columbia in the matter, for when the question of the adoption of the measure came before the people only 58 votes were cast; 57 of these favored the law, however, which shows that it caused no active opposition. Beyond the preliminary step of taking the school census, necessary in order that the nature of the problem may be better understood, the board has, as yet, not attempted to enforce the law.

That there is grave need for such a law and for its rigid enforcement is disclosed by the report of illiteracy among the pupils in Columbia who are of school age and who are not attending school. These returns were secured by the enumerators who took the recent school census. It may be added that, in interpreting what it means to be able to "read and write," the enumerators were instructed that the ability to write one's name and to read a simple sentence would satisfy the conditions. The following table shows the facts, as given by the school census:

Illiterates between 6 and 21 years of age not in school.

Schools.	Whites unable to read and write.	Negroes unable to read and write.
Waverley	24	20
Shandon	24	5
Taylor	36	22
Logan	47	14
McMaster	73	58
Blossom Street	48	43
Total	252	162

PUPILS OF COMPULSORY AGE NOT IN SCHOOL.

Tables on page 158 show that there are 233 white children and 186 negro children of compulsory age, 8–14, who are not in school. If to these figures those of the sixth and seventh years who are not in school be added, the total would stand: White children, 448; negro children, 267. These figures would indicate that quite as large a proportion of negro children of these ages are in school as of the whites, which is surprising in view of local conditions. A check on the accuracy of these returns, however, can be obtained by comparing the census returns with the enrollment of pupils as shown by the school records. This comparison is shown in the following table:

Age distribution of pupils enrolled in school compared with census totals.

School population.	Ages.																
	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	(1)
Whites:																	
Census	101	331	427	423	428	430	380	362	391	310	352	266	263	182	189	38	45
Enrolled	66	313	414	382	363	361	326	333	256	216	136	69	35	0	0	0	0
Not in school	35	18	13	41	65	69	54	29	135	94	216	197	228	182	189	38	45
Negroes:																	
Census	98	241	247	245	283	275	225	238	248	204	204	150	149	89	82	37	24
Enrolled	121	154	204	210	246	191	162	219	165	157	76	54	29	2	2	0	0
Not in school	0	87	43	35	37	84	73	19	83	47	128	96	120	78	80	37	24
Total not in school	35	105	56	76	102	153	127	48	218	141	344	293	328	260	269	75	69

[1] Age not known.

This table shows that of the children of the years 6 to 14 reported by the census, there are 459 white children and 461 negro children who are not in the public schools. That is to say, the census report as to the number of white children who are not in school checks up with the school reports, whereas in the case of the negro children it would appear that many parents have reported that their children were in school when, as a matter of fact, they were not. This is not surprising when it is recognized that many of the negro parents are ignorant and that they may have misunderstood the purpose of the

census enumerators in asking for this information. It would seem, therefore, in considering the housing problem confronting the board, that it will be safer to conclude that in the enforcement of the attendance of all of the ages of 6 to 14, provision will have to be made for an increase of about 450 children of each race. If the census returns should be increased a third, as the committee believes should be done to correct the census, then these figures would reach approximately 600 each.

ADDITIONAL ROOMS AND TEACHERS REQUIRED.

It is clear, then, that a strict enforcement of the attendance law would necessitate enlarging the department by 25 or 30 rooms at least, entailing the addition of as many teachers to the corps. Consolidations of small classes in certain schools could be effected, however, which would somewhat lessen the requirement.

The following table shows how these rooms should be distributed in order that the white pupils would be best accommodated:

White children 6 to 14 not in school, distributed by attendance districts, according to school census.

Schools.	Children not in school.	Additional rooms required.
Waverley	30	1
Shandon	34	1
Taylor	77	2
Logan	115	3
McMaster	109	3
Blossom Street and Granby	83	2
Total	448	12

A PLAN TO CARE FOR THE GROWTH OF THE SYSTEM.

To meet this situation, the committee recommends that the present system of seven grades in the elementary division and four grades in the high school be changed to a grouping of grades wherein the elementary division shall be limited to the first six years of the school course; the seventh, eighth, and ninth grades of the entire city be brought together at a central point, forming a junior high school; and the present high-school grades be extended to embrace the tenth, eleventh, and twelfth years, to be called the senior high school. Such a plan, ideally, calls for a junior high-school building, which should be at or near the geographical center of the city, near car lines which reach every part of the city, and yet at a point sufficiently removed from the senior high school so that the organization, the activities, and the entire school machinery shall be kept separate and distinct.

A division of the pupils of a system into these three groups, separating them in all of their school activities, is an arrangement which educationally can be abundantly justified.

Congregating the seventh, eighth, and ninth grades would, in Columbia, take the seventh grade out of the elementary schools, thus removing the older boys and girls from the young children. This will be an advantage to both, for with the limited playground that obtains in many schools either the older children are prohibited from playing the rough games which their natures crave and their muscles demand, or else through fear of bodily injury the little children are crowded to one side and fail to secure that opportunity for free exercise without restraint that they most need. Furthermore, through such segregation the attention of the principal and teachers can be better centered upon the needs of these young children without being diverted to the difficult problems of management, of instruction, and of control which the adolescent child of necessity raises. Too frequently in many schools of the traditional organization the difficulties and problems of the older children absorb the attention of the principal and his faculty, to the neglect of the younger children, and in consequence in many places serious weakness is to be found in the early period of school life.

ADVANTAGES OF THE JUNIOR HIGH-SCHOOL ORGANIZATION.

By bringing the seventh, eighth, and ninth grades together at a central point it will be possible for the school department to offer to the pupils in such grades a choice in the subjects of study. In the usual ward school it would obviously be impossible to offer any option, for as one proceeds upward in the grades of the system the attendance falls off rapidly. The seventh grade, therefore, is always very much smaller than preceding grades, and in many schools it is barely large enough to maintain two classes. From the standpoint of expense alone, therefore, it would not be practicable to offer to the seventh grade, scattered as it is among a number of schools, a variety of choice in subjects to be studied. Such opportunity can be provided only where a sufficient number of pupils are grouped together to make each class large enough to justify the assignment of a teacher. There can be little question that by the time young people have reached the upper grades of the grammar schools their tastes, aptitudes, and abilities are sufficiently developed to warrant giving them an opportunity for the exercise of some preference in the selection of subjects to be studied. An organization of the school system whereby such grades are brought together in numbers is the only arrangement, within reasonable limits of expense, through which this variety can be secured.

By bringing together in this way a number of pupils of the ages and attainments of those of the seventh and eighth grades, the principal and his faculty have an opportunity of initiating a splendid work through the student-body organization that can thereby be formed. Such an arrangement provides the opportunity for developing the social consciousness of the individual and through it teaching him how to conduct himself among his fellows, and at an age when the instinct for establishing social relationships runs high. Perhaps no lesson is of greater practical value to the individual than that of learning how to get on with his fellows without compromising his principles and standards. The activities coming naturally through participation in a live student-body organization provide unusual opportunities for teaching such lessons concretely, naturally, and therefore effectively. Furthermore, by means of a student-body organization high standards of conduct and character can be secured and a general school morale developed as in no other way. It has been found, too, that a measure of student government can be introduced in conjunction with such a plan, with advantage to those who participate in the work and with beneficial reaction upon the tone of the school. It has been observed that students in the junior high school who, by means of such activities, develop confidence in themselves very quickly make their influence felt in the student body of the senior high school when that school is reached. Thus, with such an internal organization of the students as this plan provides, a hitherto unsuspected and undeveloped field exists wherein can be secured highly significant results of a very practical character.

MEN TEACHERS NEEDED IN THE SCHOOLS.

Again, a segmentation of the divisions of the public-school system, in accordance with such a plan, fully justifies the paying of high-school salaries to all teachers in the junior school group who have certificates of high-school grade. Where this is done, it becomes possible to command the services of young men who are college graduates and who are willing to enter these grades as teachers and to remain therein for a time. The customary arrangement, wherein the seventh or the seventh and eighth grades are grouped with the elementary division, and wherein the elementary school schedule only applies, offers no inducement to such men. In consequence, in most communities throughout the United States the sorry fact is that generations of boys and girls are passing through the entire elementary period of school life without at any time ever having come under the influence of a male teacher. It frequently happens, therefore, that a child is never under the instruction of a man until he reaches the high school, and as nearly three-fourths of the school population of the land never enter the high school, it is clear that

the criticism that our school system is tending toward a feminization of the children is a just one. In Columbia this danger has been partially met by requiring the principals to teach part or all time. This is an unsatisfactory arrangement, however, for it eliminates them from the work of supervision, to which they ought to be devoting much of their thought and attention.

THE SENIOR HIGH SCHOOL.

Then, through such a grouping as this plan proposes, it would seem that the work of the senior high school could be made more intensive than it usually is, with higher standards of scholarship and more rigid requirements than universally obtain, and this without working a hardship upon the young people who enter the school; for it would seem that if the work in the junior high school be carefully and efficiently done the incoming students will develop a much more serious attitude toward their work, and will have oriented themselves better and more quickly in their subjects.

Moreover, the pupils entering the senior high school will have developed in the junior high school a greater cohesion than obtains under the old form of organization. Under the customary plan, pupils dribble into the high school in small numbers and from many schools. They are lacking in anything approaching community feeling or a feeling of group responsibility. They have had no experience in organized action and are not conscious of their individual responsibility in personally contributing to the establishment of a student-body sentiment that shall be high and lofty in its purpose and influence.

In consequence, it is difficult for the student body of the school to assimilate such pupils properly and completely, and if the existing school morale be low, these incomers are in no way fitted to lift it. With two or three years of community life at the junior high-school center wherein the administrative methods are shaped to develop this responsibility, the pupils would necessarily enter the senior high school at a much higher level with respect to school standards than obtains under the present procedure.

THE JUNIOR HIGH-SCHOOL BUILDING.

While the ideal plan undoubtedly is to provide a separate plant for the pupils of the junior high school, and while the majority of cities employing this form of organization have provided for such separation, yet in places where the local situation prevents, various makeshifts have been resorted to. In some instances the junior and senior high schools are housed in the same building, in other instances the junior high school is assigned to rooms in a ward school

building, and in still other instances the junior high-school building, while kept separate from the building which houses the senior high school, stands on the same plat of ground. This latter plan, which is educationally the least objectionable of the alternatives, would be, for Columbia, doubtless, the least expensive, for there is sufficient space on the present high-school site for such a building. It would mean, however, decreasing in a material way the ground needed for the activities of the playground.

One immediate effect of providing a junior high school would be the setting free of rooms in each of the elementary schools and in the high school, sufficient in number, doubtless, to care for the normal growth of the department, in all of its divisions, for several years. All of the claims, it should be added, which can be made for the junior high school for white children would apply with equal force to the negroes.

CARE FOR THE GROWTH OF THE NEGRO SCHOOL POPULATION.

The situation as to the negro children of 6 to 14 years of age follows:

Negro children 6 to 14 distributed by attendance districts—Local census.

Schools.	Reported in school.	Reported not in school.	Total.
Waverley	363	40	403
Shandon	11	4	15
Taylor	118	33	151
Logan	323	42	365
McMaster	568	100	668
Blossom Street and Granby	460	48	508
	1,843	267	2,110

From 8 to 12 additional rooms, depending upon the accuracy of the census returns, would be needed to take care of the negro children not now in school but who would come under the operation of the attendance law if it were enforced. This problem is bound up with the larger problem of caring for the negro children as a whole, and can best be viewed in conjunction therewith.

At present there are but two school plants in Columbia for the negroes—the Howard School, a combined elementary and high school, with a principal and 23 teachers; and the Booker T. Washington School, for elementary grade pupils, with a principal and 12 teachers. In these two schools there was an enrollment in 1917 of 2,237 pupils which averages more than 60 children per teacher, a condition wherein it is impossible for teachers to do anything like satisfactory work.

The Booker T. Washington School has a modern building, recently completed, which is a credit to the city, but the Howard School building is a disgrace and should be replaced by a modern structure.

It would seem that a wise program for future consummation would comprise the following steps:

1. Replace the Howard building with a modern building or buildings, planned to house a group of pupils comprising the first six grades and a second group comprising the seventh, eighth, and ninth grades only.

2. Equip and occupy the rooms in the Booker T. Washington School which are now vacant.

3. Divert the Waverley School, now occupied by white children, to the use of the negro children of elementary grade and procure a site somewhat north and west of the Waverley School and closer in from the city boundary and erect thereon a building for white children.

Such an arrangement would relieve the congestion at the Howard and Booker T. Washington Schools; would divide the city in so far as its negro population is concerned into three approximately equal attendance districts; would remove the white children of the Waverley district to a point not immediately surrounded by negro families, as now obtains; and would relieve the present crowded condition of the Taylor and McMaster buildings. This plan, in conjunction with the reorganization plan discussed in connection with housing the white children, would provide facilities of modern character for all of the children of both races for a number of years to come it is believed.

AN ATTENDANCE OFFICER IS ESSENTIAL.

An essential step in the enforcement of the attendance law is that of employing a competent attendance officer, preferably one who has had experience in social service work and who commands the respect and confidence of the community. He should be employed on full time for a 12-months year, for there is much during the vacation months which he can profitably do in visiting the employers of school children, in following up the arrival and departure of resident families, in persuading individuals who think they must drop out of school to return, in helping worthy and needy students to find work, and in laying the basis for efficient work when the school term opens. It is customary in many places to make the attendance officer a deputy of the police force and thus invest him with the authority for making arrests, though this authority should be used sparingly and only as a last resort. He should be provided with a motorcycle, as he will need to cover quickly all parts of the city and perhaps the adjacent country.

For his use the essential information contained in the school-census sheets relating to children of compulsory age should be transferred to filing cards and be grouped by attendance districts. During the first week of each term he should check his census cards with the school enrollment and investigate every case of non-enrollment. To him should be referred for investigation all cases of prolonged and unexplained absence. He can render valuable service, too, to the department by investigating the home conditions of children who are progressing badly in their work or who may be suspected by the teachers of living in insanitary, impoverished, or immoral surroundings. To him, also, should be intrusted the supervision of the taking of the annual school census, for his familiarity with the city and his acquaintanceship with individual families resident therein will go far toward rendering the census increasingly complete. By establishing relationships with charity workers, with the judges who try cases of juvenile delinquency, with social-service organizations, with police officials, with the board of health, and with employers of labor, a competent, farsighted, and thoroughly unselfish attendance officer can develop for himself a field of usefulness to the school department and to the community at large second to none.

The board should pay a salary large enough to secure a man trained to such work and large enough also, it may be added, to induce the right man to remain in the work for a period of years, for obviously in work of this character favorable acquaintanceship in the community is an important asset, and acquaintanceship is a matter of time. All too frequently, however, the appointment goes to some broken-down politician or ex-policeman, or to a poor relative of a city official and the story abruptly closes.

THE VALUE OF A SCHOOL CENSUS.

A school census taken during the same month each year of all children of school age is indispensable to the enforcement of an attendance law; furthermore, through it valuable information can be secured which when analyzed will provide the school authorities with a dependable basis for conclusions regarding many problems relating to the administration of the system. A permanent record card should be made for every family in the city, which should contain besides other social data the name, address, sex, age, nativity; whether attending public, private, or parochial school; class in such school; the reason for not attending school; if employed, where, and how; and a brief statement of the school history of every child in the family. This family record card should be made in duplicate, one copy to be retained by the attendance officer and the other to be kept on file with the principal of the school attended by the children.

If these cards are kept up to date as they should be, the whereabouts of every child of school age can be known at all times and the essential facts about each can be secured upon a moment's notice.

Such a permanent record, always in the making, checked up each year by a census taken by a house-to-house canvass, is of inestimable value in enforcing laws having to do with compulsory attendance, with child labor, and with the granting of working permits. A tabulation of such records each year by blocks and by districts will give valuable information regarding the growth of the city, the direction this growth is taking, and the changing and shifting character of the population—information which is essential if the board is to plan wisely far enough in advance to provide the necessary accommodations by the time they are needed.

OVER-AGE CHILDREN IN COLUMBIA.

Until 1915, according to the rules of the board of school commissioners, two calendar years were required for entering children to complete the work outlined for the first grade. This arrangement provided that the children of this grade should attend school during these two years but one-half of the time. A child, therefore, who entered the system in his sixth year, if he made normal progress, entered the second grade in his eighth year and the high school (eighth grade) in his fourteenth year, completing his four-year high-school course in his seventeenth year. In 1915 this plan was abolished for the white schools but retained for the negro schools. Now, in the white schools, children attend full time from the first, but enrollment before 7 years of age is discouraged though not absolutely forbidden. A child, then, entering the system in his seventh year, a year later than under the former plan, is due to reach the high school (eighth grade) at the same age as before, namely at 14.

Educators in their discussions of over-age pupils, that is, those who are retarded for any reason in their progress through school, have generally agreed to allow a leeway of one year in the age of enrollment as a concession to variable factors which enter. That is to say, children who enter the first grade of the Columbia schools, under the plan which now prevails, during their seventh and eighth years would properly be considered of normal age. Seven years later these same children should enter the first high-school year (eighth grade) at the normal ages of 14 or 15. Any who are relatively older at any point through the grade steps than these children would be are classed as over-age or retarded pupils. The same would be true also of the negro schools of Columbia, for, while the entering age is theoretically lower, 6 years, yet the course provides for half-time attendance during the first two years. The following ages, therefore, should prop-

erly be held to be normal ages for the several grades of the Columbia schools as they are now organized:

ELEMENTARY DIVISION.

First grade	Seventh and eighth years.
Second grade	Eight and ninth years.
Third grade	Ninth and tenth years.
Fourth grade	Tenth and eleventh years.
Fifth grade	Eleventh and twelfth years.
Sixth grade	Twelfth and thirteenth years.
Seventh grade	Thirteenth and fourteenth years.

HIGH-SCHOOL DIVISION.

First year	Fourteenth and fifteenth years.
Second year	Fifteenth and sixteenth years.
Third year	Sixteenth and seventeenth years.
Fourth year	Seventeenth and eighteenth years.

Children under these ages are called "under-age" children, either because they have progressed through the grades more rapidly than children usually do or because they entered the system before they were 7 years of age. Children above these ages are called "over-age" or "retarded" children, due either to the fact that they have had to repeat work in the grades or because they were delayed in entering school beyond the eighth year.

The following tables show the age-grade distribution of the school children of Columbia, white and negro, for the first term of 1917 segregated in to "under-age," "normal age," and "over-age" groups. The numbers to the left of the first vertical lines represent the pupils in the several grades who are under age, those between the vertical lines indicate the number who are of normal age, and those to the right of the second vertical lines express the number of children who are over age or retarded in their work.

Age-grade distribution of white children.

Grades.	Total pupils.	Ages.														Under-age.	Normal age.	Over-age.
		6	7	8	9	10	11	12	13	14	15	16	17	18	19			
1	577	55	254	168	55	24	15	3	....	2	1	....	....	....	....	55	422	100
2	517	....	75	203	120	47	32	19	12	6	2	1	....	....	....	75	323	119
3	495	....	....	36	185	146	73	31	18	6	....	....	....	....	....	36	331	129
4	460	....	....	1	35	128	144	101	31	11	9	....	....	....	....	36	272	152
5	345	....	....	....	....	21	101	109	77	30	4	2	1	....	....	21	210	114
6	276	....	....	....	....	....	9	78	105	62	17	5	....	....	....	9	183	84
7	222	....	....	....	....	....	4	23	72	69	38	13	2	1	....	27	141	54
I	246	....	....	....	....	....	....	4	29	64	100	45	4	1	....	32	164	50
II	153	....	....	....	....	....	....	....	1	16	52	55	22	7	....	17	107	29
III	77	....	....	....	....	....	....	....	....	3	10	24	27	11	2	13	51	13
IV	39	....	....	....	....	....	....	....	....	....	1	2	17	15	4	3	32	4
Total	3,407	55	329	408	395	366	378	368	344	269	234	147	73	35	6	324	2,236	847

Age-grade distribution of negro children.

Grades.	Total pupils.	Ages.															Under-age.	Normal age.	Over-age.
		6	7	8	9	10	11	12	13	14	15	16	17	18	19	20			
1	676	121	144	136	113	88	38	28	6	2	....	....	....	....	....	....	121	280	275
2	300	....	9	47	53	60	44	28	34	11	5	....	....	....	....	....	9	100	191
3	288	....	1	16	39	55	50	45	40	17	15	6	....	....	....	....	17	98	173
4	204	....	....	5	16	21	31	28	44	35	17	6	1	....	....	....	21	52	131
5	171	....	....	....	....	6	23	22	42	38	22	6	4	4	2	2	6	45	120
6	110	....	....	....	....	....	5	10	34	24	19	13	4	1	....	....	5	44	61
7	83	....	....	....	....	....	....	1	9	20	23	21	9	....	....	....	1	29	53
I	69	....	....	....	....	....	....	....	10	19	26	7	5	2	....	....	10	45	14
II	65	....	....	....	....	....	....	....	....	....	28	15	16	6	....	....	0	43	22
III	35	....	....	....	....	....	....	....	....	....	2	2	15	15	1	....	2	17	16
Total.	2,001	121	154	204	221	243	191	162	219	166	157	76	54	28	3	2	192	753	1,056

These tables, it should be stated, present the situation in Columbia in a somewhat more favorable way than the facts warrant. The column showing the number of underage children, for example, is misleading, for the reason that the system admits children of 6 years of age. As the lines are drawn in the preceding tables all such children who have made regular promotions fall to the left of the line and are classed as under-age or accelerated pupils. The percentages, then, of the whole body actually accelerated is smaller than these tables show. The column marked "Over-age" is also somewhat misleading as it does not show as large a proportion in the over-age group as the facts warrant, for the reason that children entering at 6 years might repeat their work an entire year in this grade and still fall within the group marked "Normal age." As the number of such children can not be easily ascertained, no correction has been attempted. At best the tables indicate the general tendency only, and in all comparisons made between Columbia and other cities in respect to "accelerated" and "retarded" pupils, based upon such statistics, this fact should be remembered that in Columbia there are fewer children in the system who are accelerated than the tables show and a large number of over-age or retarded children.

Age-grade distribution of Columbia white and negro children compared.

Grades.	Under-age.				Normal age.				Over-age.			
	White.		Negro.		White.		Negro.		White.		Negro.	
	Number.	Per cent.	Number.	Per cent	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Elementary division:												
First grade	55	9.5	121	17.9	422	73.1	280	41.4	100	17.4	275	40.7
Second grade	75	14.5	9	3.0	323	62.5	100	33.3	119	23.0	191	63.6
Third grade	36	7.3	17	6.0	331	66.9	98	34.0	128	25.8	173	60.0
Fourth grade	36	7.8	21	10.3	272	59.2	52	25.5	152	33.0	131	64.2
Fifth grade	21	6.1	6	3.5	210	60.9	45	26.3	114	33.0	120	70.2
Sixth grade	9	3.2	5	4.5	183	66.3	44	40.0	84	30.5	61	55.5
Seventh grade	27	12.2	1	1.2	141	63.5	29	34.9	54	24.3	53	63.9

Age-grade distribution of Columbia white and negro children compared—Continued.

Grades.	Under-age.				Normal age.				Over-age.			
	White.		Negro.		White.		Negro.		White.		Negro.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
High-school division:												
First grade	32	13.0	10	14.5	164	66.7	45	65.3	50	20.3	14	20.3
Second grade	17	11.1	0	.0	107	70.0	43	66.2	29	18.9	22	33.8
Third grade	13	16.9	2	5.7	51	66.2	17	48.6	13	16.9	16	45.7
Fourth grade	3	7.7	.....	.....	32	82.0	.....	.....	4	10.3	.....	.....
Total	324	9.5	192	9.5	2,236	65.7	753	37.7	847	24.8	1,056	52.8

This table shows that for both white and negro children the "under-age" group comprises 9.5 per cent of the enrollment of the respective races. As we have already pointed out this is larger than the actual facts warrant. In comparison with other cities, however, it is low. As to the group of "over-age" children the proportion among the negroes runs much higher in each grade excepting in the first year of the high school, where each stands at 20.3 per cent. In general, it may be said that for every white child who is retarded in his progress through school there are two negro children who are over age for their grades. Crowded classes, greater irregularity of attendance, and the complete lack of the supervision of negro teachers are factors which account in part, at least, for this difference in the degree of the retardation of the two races.

By combining the facts of the preceding table relating to the white and negro children the situation for the Columbia system as a whole is seen. The following table shows the number of over-age children of the system, distributed by grades.

Over-age pupils in Columbia, distributed by grades.

Grades.	Enrollment.			Over-age pupils.			Per cent of enrollment.
	White.	Negro.	Total.	White.	Negro.	Total.	
Elementary division:							
First grade	577	676	1,253	100	275	375	30.0
Second grade	517	300	817	119	191	310	38.0
Third grade	495	288	783	128	173	301	38.4
Fourth grade	460	204	664	152	131	283	42.6
Fifth grade	345	171	516	114	120	234	45.3
Sixth grade	276	110	386	84	61	145	37.5
Seventh grade	222	83	315	54	53	107	34.0
High-school division:							
First year	246	69	315	50	14	64	20.3
Second year	153	65	218	29	22	51	13.3
Third year	77	35	112	13	16	29	25.9
Fourth year	39	0	39	4	0	4	10.3
Total	3,407	2,001	5,408	847	1,056	1,903	35.1

Variations from the normal age among cities.[1]

Cities.	Enrollment.	Per cent under age.	Per cent normal age.	Per cent over age.
Amsterdam, N. Y.	2,371	49	23	28
Bayonne, N. J.	7,033	27	31	42
Canton, Ohio	5,567	28	38	34
Danbury, Conn.	1,967	38	31	31
Danville, Ill.	2,260	28	34	38
East St. Louis, Ill.	5,320	22	34	44
Elizabeth, N. J.	7,058	23	31	46
Elmira, N. Y.	2,487	38	28	34
Hazelton, Pa.	2,655	22	36	42
Indianapolis, Ind.	23,874	34	37	29
Kenosha, Wis.	2,223	16	36	48
Milwaukee, Wis.	32,251	28	41	31
Montclair, N. J.	2,568	18	34	48
Muskegon, Mich.	3,163	25	40	35
New Orleans, La. (white)	22,664	20	31	49
Plainfield, N. J.	2,312	30	30	40
Reading, Pa.	10,585	25	35	40
Rockford, Ill.	5,649	28	40	32
Topeka, Kans.	4,894	26	38	36
Trenton, N. J.	8,787	31	31	38
Des Moines (Report, 1915)	.....	13	42	45
Altoona (Report, 1915)	.....	13	37	50
Butte, Mont. (survey)	.....	7	42	51
Salt Lake City (survey)	2,859	16	40	43
Brookline, Mass. (survey)	.....	4	40	56
San Francisco, Cal. (survey)	.....	12	43	45
COLUMBIA, S. C.	5,408	10	55	35

[1] Except for the last 7 cities in this list the statistics were taken from Ayres, The Identification of the Misfit Child. (1911.)

In respect to under-age children—that is, those who are progressing through the grades more rapidly than their fellows—Columbia ranks among the cities having the lowest percentage. Theoretically, if the course of study of a given system is shaped with the requirements of the majority in mind then there should be just about as many children passing through the grades faster than the normal rate as there are those who are over age. In a number of cities of the foregoing list the under-age and over-age columns are nearly balanced. As promotions become more flexible, and as a system concerns itself more and more with the needs of individual children, this theoretical balance will increasingly be approximated. In general, systems having few children who are accelerated in their work are rigid, inflexible, more or less mechanical, and tend to consider mass requirements rather than the requirements of individuals.

The belief that classes of pupils must be held together, intact for an entire term, and that shifts and reorganizations should be made at the end of a term only, is responsible undoubtedly for much of the rigidity of school systems. In point of fact, in schools where two or more classes are on the same level of advancement respecting the course of study, it is easy to group the best in each at frequent intervals during the term, permitting those who are capable to skip a month's assignment of work or more and in this way to accelerate their progress through the grades. The ungraded class plan, discussed elsewhere in this report, is another way of accomplishing the same end. Perhaps, however, the most effective means

of introducing this element of flexibility in the Columbia system would be that of substituting for promotions by examination the plan of promotion based on the normal distribution of ability. This plan is discussed in detail in Section V.

The second point to be noted in connection with the preceding table is the relative place Columbia occupies among other cities respecting the percentage of her pupils who are over age. Of her enrollment, 35.1 per cent are over age, against an average for the list of 40 per cent and a median of 40 per cent also. In this matter her record among these cities is well within the average. Comparisons here, however, are not to be taken as indicating more than general tendencies, for to be fair another factor needs to be known, and that is what percentage of over-age pupils in these cities have dropped out of school altogether. Obviously a city where a large percentage of repeaters withdraw will make a more favorable showing in a comparison as to over-age percentage than will a city which holds its over-age children in its system. We know how many children were repeating work in the Columbia schools during the last half of 1917, and we know, also, how many of these withdrew from schools, but we do not know what the withdrawals of repeaters in the other cities of the foregoing list have been.

THE REPEATERS IN THE COLUMBIA SYSTEM.

When for any reason a pupil fails to be promoted at the accustomed time he is usually obliged to repeat the work that he has been over during the year; or half-year, if promotions are made twice a year. Such a child is called a "repeater" and in some schools certain children have been held in a given grade so long that the same work has been gone over six times. In Columbia the largest number of repetitions of a single grade reported was five, and that for but one child, a negro in the first grade of the Booker T. Washington School. In the system as a whole, during the last term of 1917, there were 577 children who were taking their work the second time, 53 taking it the third time, 15 the fourth time, and 1 the fifth time. Altogether, then, during the closing term of 1917, there were 646 pupils, or 12 per cent of the enrollment, who were repeating their work one or more times.

THE WITHDRAWAL OF REPEATERS.

The curious fact appears that as a group the repeaters, even though they have failed in promotion, show a greater tenacity than others about remaining in school. The tables which follow show that 16.3 per cent of those repeating their work for the term dropped out of school, whereas the system as a whole during the same period lost

18.1 per cent of its enrollment. The tables which follow bring out these facts about the loss of pupils from the system, compared with the loss among the repeaters, together with some of the reasons given by the teachers which produced these repeaters.

Loss of pupils from the system.

Pupils.	Total enrollment.	Number belonging at end of term.	Loss.	Percentage of loss.
White children:				
Elementary	2,892	2,440	452	15.6
High	515	452	63	12.2
Total	3,407	2,892	515	15.1
Negro children:				
Elementary	1,832	1,485	347	18.8
High	169	151	18	10.6
Total	2,001	1,636	365	18.2
Grand total	5,408	4,548	981	18.1

Loss among the repeaters.

Pupils.	Taking work second time	Withdrawals.	Taking work third time.	Withdrawals.	Taking work fourth time.	Withdrawals.	Total repeaters.	Total withdrawals.	Percentage withdrawing.
White children:									
Elementary	277	48	31	9	9	5	317	62	19.5
High	33	5	4	1	0	0	37	6	16.2
Total	310	53	35	10	9	5	354	68	19.2
Negro children:									
Elementary	262	31	18	2	6	1	286	34	11.9
High	5	3	0	0	0	0	5	3	60.0
Total	267	34	18	2	6	1	291	37	12.7
Grand total	577	87	53	12	15	6	645	105	16.3

Causes producing the repeaters, advanced by teachers.

	Number of cases.
Sickness	80
Entering new school system	95
Indifference to school and study	216
Work too difficult	69
Mentally deficient	146
No reason given	39
Total repeaters	645

THE SCHOOL HISTORY OF 100 COLUMBIA PUPILS.

Preceding tables are based upon statistics of large groups of children as shown by school and census records. They indicate with approximate accuracy the general trend in the systems studied, but

within the limits set there are of necessity many opportunities for individual variations which the statistical method will not disclose. Much more accurate and valuable conclusions could be drawn were it possible to get at the school history of each child entering a system. Many departments, recognizing the need of more accurate information relative to the efficiency of the schools, are modifying their records so that the history of the progress of every child entering the system will be available at all times for such study.

The records of promotions and failures of every child who has entered the Columbia system have been kept in the teachers' registers, all of which, from the first, have been preserved. It was possible, therefore, to go back 11 years in the system, take 100 children who entered at that time and who should have graduated from the high school in 1917, and by tracing each through the registers to compile an accurate record of what happened to the group. This was done, and the tables which follow show the results of this study. It should be added that in making up the list of 100 names, 50 white boys and 50 white girls were taken in the order in which their names chanced to appear in the registers of the school year 1905–6. The list comprises, therefore, a typical group of white children.

Survival of 100 white pupils entering the first grade together.

	Elementary grades.							High-school grades.			
	I.	II.	III.	IV.	V.	VI.	VII.	I.	II.	III.	IV.
Entered	100	78	71	59	54	47	41	29	23	14	10
Left	22	7	12	5	7	6	12	6	9	4	3
Percentage left of entered	22.0	8.9	16.9	8.5	13.0	12.7	29.2	20.7	39.1	28.5	30.0

Notes on the above table.

Two who left the fourth grade are known to have graduated in regular time at another school.

One entered Clemson College from the ninth grade.

Seven graduated; two are repeating their work; one entered the University of South Carolina from the eleventh grade.

Scholarship distribution of those leaving the system.

Pupils.	Scholarship satisfactory, so may have entered other systems.	Scholarship satisfactory, but did not enter other system.	Graduated from other systems.	Failed in school work.	Still in local school system.	Entered college before graduation.	Graduated from local school.	Total.
Later history not known	24	.....	.....	18	.....	.....	.....	42
Later history known	.....	7	2	38	2	2	7	58

OBSERVATIONS BASED ON THE PRECEDING TABLES.

1. Regarding survival:

47 entered the sixth grade.
29 entered the first high-school year (eighth year).
14 entered the third high-school year (tenth year).
7 graduated from the local high school.
2 are known to have graduated from other high schools.
2 are still in the system.
2 entered college before completing high school.

2. Regarding the 7 local graduates (3 boys, 4 girls):

5 completed the course in normal time.
2 gained one year each.
2 went into business.
1 entered Clemson College.
1 entered the University of South Carolina.
1 joined the Navy.
2 remained at home.

3. Regarding the 53 who left before entering the sixth grade:

22 left before reaching the second grade.
31 entered the second grade.
7 of the 31 who entered the second grade, but who left before reaching the sixth, were promoted regularly as long as they remained in school.
2 were accelerated in their promotions.
22 had records of repetition and failure in work.

4. Regarding the 22 who left before reaching the second grade:

6 were under 6 years of age upon entering school.
8 were 6 but less than 7 years of age.
4 were 7 but less than 8 years of age.
2 were 8 but less than 9 years of age.
1 was above 9 years.
1 had no age given.

5. Regarding the 18 who entered the sixth grade, but left before entering the high school (eighth grade):

3 were promoted regularly as long as they remained.
2 were accelerated in promotion.
13 had records of repetition and failure in work.

6. Regarding the 19 entering high school, but leaving before completing the third year:

3 were regularly promoted during their course.
1 entered Clemson College from the ninth grade.
15 had records of repetition and failure.

Entering age in relation to retardation in the first grade.

Pupils.	Below 5 years 6 months.		5 years 6 months but less than 6 years.		6 years but less than 7 years.		7 years but less than 8 years.		8 years but less than 9 years.		9 years but less than 10 years.		No rating.	Total.
	Promoted.	Failed.	Promoted.	Failed.	Promoted.	Failed.	Promoted.	Failed.	Promoted.	Failed.	Promoted.	Failed.		
Number.....	0	5	10	9	35	10	17	4	3	0	2	0	5	100
Percentage....	0.0	100.0	52.7	47.3	71.5	28.5	76.5	23.5	100.0	0.0	100.0	0.0	.....	.....

Notes on the above table.

In the first grade 67 were promoted; 28 failed; 5 had no rating.

All below 5½ years failed; all above 8 years passed.

The percentage of failures of those below the sixth year of age was 58.3 per cent; of those between 6 and 7 years, 28.5 per cent; and between 7 and 8 years, 23.5 per cent.

The percentage of failures increases as entering ages decrease from 6 years and decreases as entering ages increase above 6 years.

THE EXPECTANCY SURVIVAL COMPARED WITH ACTUAL SURVIVAL.

Several notable studies of school mortality and survival have been made during the past 10 years, all based upon mass statistics, which, as already pointed out, can go no further than to suggest a general tendency. While the foremost of the investigators of this matter disagree in minor details, yet noting as an exception Thorndike's belief that school elimination begins early in the primary grades, they agree, in the main, that of every 100 children annually entering the first grade of city schools nearly all will remain to the end of the fifth grade; that about 50 out of every entering 100 will reach the last grade of the elementary school; that 30 to 40 will enter the high school; that 8 to 10 will graduate from the high school; that of this number from 1 to 3 will enter normal schools, colleges, and schools beyond the grade of high school; and that about one-half of these will remain to the completion of their course.

It will be of interest to compare this expectancy as to survival with the actual facts as shown by the record made by 100 of Columbia's pupils. This comparison follows:

Expectancy survival of 100 entering pupils compared with actual survival.

	Elementary grades.								High-school grades.			
	1	2	3	4	5	6	7	8	I	II	III	IV
Thorndike[1]	100	100	100	90	81	68	54	40	27	17	12	8
Ayres[2]	173	129	128	120	106	90	71	51	40	19	14	10
Strayer:[3]												
Boys	150	120	115	110	100	85	65	50	35	20	14	10
Girls	140	115	110	110	95	85	75	60	45	30	20	16
Columbia, S. C.	100	78	71	59	54	47	41	.....	29	23	14	[4] 7

[1] Thorndike: The Elimination of Pupils from School, p. 111.
[2] Ayres: Laggards in Our Schools, p. 57.
[3] Strayer: Age and Grade Course of Schools and Colleges, p. 135.
[4] Graduated.

Thorndike's contention that the break in school attendance begins in the primary grades is supported by this study of Columbia. However, it should be pointed out that in the systems studied by Ayres and Strayer compulsory attendance was probably enforced, while in Columbia no attempt has been made to enforce the law in this particular. In Columbia the break began in the first year and

was heavy throughout all the grades of the elementary school, the three points of especial danger being the first grade, the last grade of the elementary school, and the second year of the high school, the loss at each point being, respectively, 22 per cent, 29.2 per cent, and 39.1 per cent of those entering the grade (see chart page 175). In general it may be said that the history of this group in Columbia follows Thorndike's theoretical distribution more closely than either that of Ayres or Strayer. However, before any hard and fast conclusion can be drawn as to the actual facts regarding mortality and survival among our city school systems, many more studies of the school histories of typical groups of children in various parts of this country must be made.

The facts, then, concerning Columbia's holding power justify the conclusion that—despite the handicaps of inadequate maintenance, meager equipment, lack of adequate supervision, the failure to enforce the attendance law, relatively inflexible methods of promotion, and much teaching of a content which is uninteresting and unrelated to anything significant in the child's world—the system, though falling short of realizable possibilities, yet compares favorably with the tendency among the city systems of the country.

SUMMARY.

1. The school census gives a total of 7,938 children, 4,898 whites and 3,040 negroes, in Columbia between the ages of 6 and 21 years. There are reasons for thinking that this total may be about one-third short of the actual number.

2. According to the census there are 233 white children and 186 negroes of compulsory age, 8–14, not in school. To enforce compulsory attendance for all children from 6 to 14 years of age, additional provision would have to be made for about 450 children of each race.

3. To care for the growth of the white school population it is recommended that the system be reorganized on the basis of six grades in the elementary division; three grades in the junior high-school division; and three grades in the senior high-school division. By erecting a building for the junior high school and congregating thereat the seventh, eighth, and ninth grades of the system, sufficient room will be obtained, it is believed, to care for the growth of school attendance for a number of years.

4. To house the negro children the Howard School buildings should be replaced with modern buildings planned to accommodate two groups of pupils; one, comprising the first six grades, and a second, comprising the seventh, eighth, and ninth grades only. The vacant rooms of the Booker T. Washington School should be equipped; and the committee suggests that the Waverley School should be turned over to negro occupancy after a building for the

white children of the neighborhood has been provided, somewhat closer in from the city limits and farther to the north.

5. A progressive family census record should be kept which should be checked up each year by a school census taken under the supervision of an attendance officer, who is essential to the enforcement of the compulsory attendance law.

6. Of the school enrollment, 9.5 per cent are under age for the given grades; 55.3 per cent are of normal age; and 35.1 per cent are over-age. Except in the percentage of under-age children, which is low, Columbia ranks well within the average of the cities in these proportions.

7. Twelve per cent of the enrollment repeat their work one or more times. This is too large a proportion.

8. The history of 100 pupils who entered the first grade together 11 years ago shows the following survival: 78 of them entered the second grade; 71 entered the third grade; 59 entered the fourth grade; 54 entered the fifth; 47 entered the sixth; 41 entered the seventh; 29 entered the first year of the high school (the eighth grade); 23 entered the second year; 14 entered the third year; 10 entered the fourth year, of which number 7 graduated from the local school.

9. The facts concerning the holding power of the Columbia system warrant the conclusion that the system, though falling short of possibilities, compares favorably with other cities of this country.

VII.—SUMMARY OF GENERAL RECOMMENDATIONS.

(The following comprise only the more general recommendations which the survey committee submits; a summary of the detailed recommendations will be found at the end of each chapter or, in some instances, at the end of important divisions of chapters. It is not possible, of course, neither is it desirable, to introduce all of the recommendations made in this report at once. Rather, in making its report, the committee has attempted to set forth a constructive program, the inauguration of which should properly extend over a period of years.)

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1. *Length of the school course.*—Accepted school practice in the United States has fixed upon 12 years, beginning with the age of 6 as the proper length of the combined elementary and high-school periods. For a time in the New England States the prevailing course was one of 13 years, beginning with the age of 5; while in the Southern States the tendency has been to fix the length at 11 years and the beginning age at 6 or 7. In general, however, it is now agreed that the plan of 12 years, with a child entering at 6, best meets the educational needs of all.

As this time allotment now prevails in a large majority of cities and States, except in the South, and as it is being adopted in the cities of this section also; as the graduates of the Columbia schools should be as well equipped as are the graduates of the best schools of the United States; and as this is impossible when Columbia's course is shorter than that of most other cities, the committee recommends that the work of the elementary and high-school divisions be lengthened to an aggregate of 12 years, and that the age of 6 be fixed as the entering age.

2. *Regrouping of the grades.*—The practice which has prevailed among cities of dividing the 12 years or grades into an elementary division of 8 years and a high-school division of 4 years is changing to what is known as the six–three–three arrangement; that is, to an organization in which the elementary period is limited to 6 years and the high-school period is extended to 6 years but broken into two 3-year periods. One of these, usually comprising the seventh, eighth, and ninth grades, is generally called the junior high-school period; the other, the senior high-school period. This plan has been tested out so thoroughly among so many cities during the past eight years, and has met with such universal favor, that it seems fairly certain to become the typical grouping arrangement of this country. The committee recommends that this form of organization be adopted in Co-

lumbia and that the necessary adjustments be effected. These are discussed in detail on pages 161–165 of this report.

3. *The daily session.*—Ever since the school system of Columbia was established, the practice which prevails in the South has been followed, namely, beginning the single daily session at 9 a. m. and closing at 2 p. m., with two recess intermissions of 15 minutes each. The committee believes that the arrangement in effect generally, except in the South, of having a forenoon session and an afternoon session, the one beginning at 9 and closing at 11.30 or 12, and the other beginning at 1 or 1.30 and extending to 4 or 4.30 in the afternoon, is preferable.

Under the present plan when dismissal time comes teachers and children are hungry, and in consequence there is a tendency for all to make a rush for their homes. Hence no opportunity is afforded for the giving of that personal and individual help which many of the children need. Again, children can not do good work when hungry, so there must be a time toward the close of the session, under the arrangement which now obtains, when on this account there is a loss in the efficiency of the pupils' work. Furthermore, as many parents are laboring people and can not arrange for a meal at 2.30, as professional and business men can, many of the children get nothing to eat when they reach home except what is left over from the noon meal. With many this means that the only hot food they get is that which is served at breakfast, for the custom prevails in the South of making the mid-meal the hot meal of the day, the supper usually being light and often cold.

While it is pleasant for teachers to be dismissed for the day early in the afternoon, and while a double session plan will affect the opportunities which some of the children have for after-school work, nevertheless the committee feels that the educational benefits of the two-session plan outweigh the disadvantages and recommends that it be adopted.

4. *An all-year school session.*—In various sections of the country cities are adopting the plan of breaking the year up into four quarters of 12 weeks each, and holding a school session for the aggregate of 48 weeks per annum.

The plan, meeting as it does the needs of a greater number of children, introduces thereby desirable elements of flexibility in the school system. It eliminates the wastage due to the shut-down of expensive school plants for the vacation period; and it provides opportunity for usefully employing the time of pupils who otherwise would be idle or else occupied in running the streets. Furthermore, it is now coming to be recognized that continuous school attendance works no hardship upon healthy children so long as worry and unnecessary mental strain are avoided.

Then, too, the all-year session harmonizes naturally with the plan, discussed elsewhere, of offering an opportunity to pupils of high-school age to alternate between school and outside work. It also enables those who desire to do so to pass through the schools more rapidly than formerly, thus making it possible for them to become self-supporting at an earlier age than heretofore.

The committee indorses the plan and would suggest that steps be taken at an early date to make the modifications in the present form of organization which its adoption would entail. The transition would not be difficult, requiring only the expansion of the summer school which is now held.

The plan is discussed more fully on pages 61, 62 of this report.

5. *Cooperative schools.*—The suggestion which the committee makes here is merely this, that arrangements be entered into between the school and the employers of labor in particular local industries whereby both boys and girls of high-school age may be permitted to alternate between school and outside employment in periods of one or two weeks. This plan is set forth in some detail on pages 79, 80 of this report. This arrangement gives the school the use of industrial equipments which it is impossible for the school to duplicate; it gives the young people the opportunity of securing industrial or business training under actual conditions; it enables them thereby more intelligently to determine their own aptitudes; and it helps them to become partly self-supporting, at least, while they are yet in school. No separate schools are needed, for the modification of schedule and of organization for pupils who would wish to take advantage of such an opportunity would not be difficult. A study should be made of local needs and opportunities with a view to introducing such a plan for the training of both white and negro children of high-school age.

6. *Pupil promotion.*—While Columbia's present plan of promotion, which is based in part upon formal examinations and in part upon term standings, is the plan which is in operation very generally throughout the country, nevertheless, as it is administered, it works an injustice upon children, for it requires each pupil to square his work by a vague, intangible, theoretical standard of excellence set up by each teacher and which unwittingly fluctuates with her every emotional change.

Every group of children not artificially selected has a distribution of ability which is about the same as that of every other group. This distribution of ability should be the norm which should guide teachers in making their promotions. Such a plan eliminates the variations of standard due to differences among teachers and enables the class itself through its own progress to determine its own standards of accomplishment and of promotion. Such a plan would tend im-

mediately to break up the habit of failing, which the committee fears the school children of Columbia are forming, substituting therefor the habit of succeeding.

The plan is discussed in detail in Section V; the reasons are given, also, which impel the committee to urge its adoption.

7. *Supervision.*—The committee finds that the supervision of the schools, on the purely educational and professional side of the work, is entirely inadequate. The superintendent is both the secretary and the treasurer of the board. Besides the duties incident to this relationship, he has had to assume the responsibility for carrying into effect a 12-year building program. Along these lines of his activity his work has been admirably done, but he has found it impossible at the same time to supply personally that coordinating and stimulating influence which good educational teamwork demands. The supervisor of the elementary grades has overworked herself in the effort to do what she recognizes needs to be done. Part of her time has been diverted to distributing supplies, but even though her entire time were spent in the schools it would still be insufficient to satisfy the need. Moreover, the principals of even the larger schools have never been permitted to assume any authority in their schools in directing or supervising the teaching activities. In consequence, then, of these conditions, the teachers are not getting the constructive help in their work which they need.

Efficient help should at once be secured to free the superintendent from routine duties and permit him to give his mind over to constructive educational thinking and planning. If the junior high school form of organization be adopted, the superintendent, together with an elementary supervisor, restricted in her responsibility to the first six grades, and both working with and through competent principals who have sufficient time free from teaching to enable them to keep in close touch with the classroom work of their teachers, would provide an adequate corps of supervision running throughout the system. Such an arrangement, supplemented by supervisors of certain special subjects, such as music, penmanship, drawing, industrial arts, and home economics, and in the high schools by department heads working under the immediate authority of the principal, should provide a satisfactory supervisorial organization at comparatively small additional cost to the department.

The committee feels that the supervision of the negro schools on the side of the instructional activities has been particularly lacking. The plan which is employed in important cities of the South of having their white supervisors, both men and women, direct the work of these schools, just as they do the work of the white schools, should be adopted in Columbia. For surely, if the city is going to provide school buildings and school equipment for the negroes and employ

teachers and maintain schools for them, it ought to follow up the work of these teachers and see that it is properly done.

The need of more supervision in the Columbia schools is discussed in Section V, and some of the results of inadequate supervision are pointed out.

8. *A schedule of salaries.*—Under the present salary schedule of the Columbia school corps, after paying for their board, room, laundry, and car fare for the nine months of the school term, the women teachers of the department have a margin of from $185 to $427.50 only, out of which they must provide their clothing and incidentals for the entire year and also their expenses for the three vacation months. Of the 165 cities listed by the United States Commissioner of Education as being in Columbia's population class (25,000 to 50,000), Columbia stood No. 8 from the bottom in the amount expended in 1915–16 in salaries of principals, supervisors, and teachers per pupil in average daily attendance. Of these 165 cities, 138 expended one and one-half times as much as Columbia, while 36 of them expended twice as much or more. Since that date the cost of living has risen enormously. Under conditions which now obtain it is impossible to attract to the schools, or to hold after they have once entered the system, teachers of the type that are needed.

The committee recommends an immediate and generous revision of the salary and wage schedules of all the employees of the school department. It suggests (see p. 45) a schedule for the elementary teachers which recognizes both length of service and relative merit. A detailed discussion of this matter will be found in Section III.

9. *The kindergarten.*—The kindergarten has won its way to a permanent place in the school organization of this country. There is evidence tending to show that kindergarten training lessens the failures of children in their later school work. This tendency is especially marked in the first grade. It exercises this influence both directly and indirectly; directly, in the sense that such training tends to fit a child for "finding himself" quickly in his school work; and, indirectly, by keeping children out of the first grade until they are more mature.

In Columbia one free kindergarten, supported by benevolences, has been established in the Blossom Street School. The committee recommends that this class be taken over by the school department and made an integral part of its system and that other classes be established in some other schools of the city. For a discussion of this topic, see pages 53–58 of this report.

10. *Evening classes.*—Evening schools for both children who can not attend the day school and for adults who wish to make up for lost opportunities have come to be a recognized part of the school machinery of all progressive communities. Columbia has made a

start in providing such opportunity, but should make definite plans for extending this most important department of school work.

11. *The negro schools.*—The Howard School is not a fit place for housing school children and should be replaced by a building of modern type. The committee suggests that a study of local conditions might show that the present site could be sold advantageously and a site purchased elsewhere which would be more suitable for school purposes.

The committee suggests, also, the desirability of permitting negro children to occupy the Waverley building after a building for the white children of the neighborhood has been erected to the north and somewhat farther in from the city limits.

With these changes it is believed that the negro school population can be taken care of for a number of years to come. These suggestions are discussed in some detail on pages 165, 166 of this report.

12. *Home economics.*—Work in home economics should be required of all girls from the fifth to the ninth grade, inclusive, and elective courses should be provided for those in the more advanced grades who desire the work. Afternoon and evening extension courses should also be provided for home makers and for young women now in stores and offices. At present central schools only should be equipped for the work, although it is desirable ultimately that the work should be done in all schools. A practice house should be established in the Blossom Street neighborhood. All schools having equipment should utilize the cooking work in a practical way by making the product the basis of noon lunches. One supervisor for the city should be provided, and she should be given an adequate force of assistants. For a detailed discussion, see pages 75–79.

13. *Manual training.*—Work in this department for the boys should parallel that in the home economics for the girls. When the girls of a given class are attending their sewing and cooking courses, the boys of the same class should be in the shops.

Beginning with the junior high-school period, opportunity should be provided for gaining instruction in woodworking and in machine-shop work which would prepare the pupils for entering the industries later in a wage-earning capacity, if desired. Special technical courses leading to the vocations should also be provided where there are groups sufficiently large to justify the expense.

The cooperative plan of alternating work in the school is commendable, and will give those who participate the chance of learning a vocation while yet in school.

14. *Instruction in agriculture.*—Agricultural courses should be organized in the high schools, and each pupil taking these should be required to illustrate the work of the term or year by completing at home under the supervision of the instructor an agricultural project.

The high-school instructor in agriculture should be required to train and direct grade teachers in showing the children of their classes how to grow gardens at their homes. See the discussion on pages 63–74 of this report.

15. *Playground and recreational activities.*—As now organized these activities are administered by a municipal department acting through a supervisor of playgrounds. During vacations and after school the grounds of some of the schools are used for supervised play. No arrangements, however, have been effected whereby the use of the basement facilities of the schools is permitted. The committee recommends that the work be turned over to the board of school commissioners to administer, for the recreational department could be made more effective as an integral part of the school system. Under such an arrangement the supervisor would have charge of organized games at recesses, would train the teachers to conduct physical exercises in their classrooms, and would organize and supervise the play activities of the children and adults during after-school hours. By such plan waste would be eliminated and greater efficiency be secured. See pages 73, 74 of this report.

16. *School-supervised home gardening.*—Gardening done by children at home in yards and vacant lots under constant and intelligent direction has great educational and economic value and should be made an essential part of the work of the schools. For this purpose there should be employed by school officials a sufficient number of teachers to allow one teacher-director of garden work for every 150 children between the ages of 8 and 15. These teachers should be employed for the entire year and should give their afternoons and Saturdays during the regular school term and all vacations to instructing and directing the children in gardening work.

17. *The compulsory attendance law.*—The compulsory attendance law now on the statute books should be enforced for both white and negro children alike. To accomplish this effectually an attendance officer is required who should keep a cumulative family record card and check this up each year by taking a school census. To him should be referred all cases of prolonged or unexplained absence on the part of children. He should be called upon to investigate the home conditions of children who are progressing badly in their work. A salary should be paid sufficient to secure a man trained to do this work, and sufficient, it may be added, to induce the right man to remain for a period of years in the work. For the discussion of this recommendation see pages 166, 167 of this report.

18. *Special classes for exceptional children.*—There are now enrolled in the Columbia system approximately 200 children who are exceptional in the sense that their needs require that they be placed in

special classes for individual instruction by teachers specially trained for this kind of work. To meet the need among the white children three special classes should be organized; one for the feeble-minded, one for the partially blind, and one for the partially deaf. Transportation for those living at a distance and who can not afford the necessary car fare should be provided by the board. The same facilities should be extended to the negro children as soon as the housing needs for the negro children who are normal have been met.

A "restoration" or "ungraded" class should be established in each of the large schools for those children who are irregular in their work and who are in need of more individual instruction than the regular teacher of the class can give. See the discussion on pages 58–62.

19. *Semiannual promotions in the negro schools.*—The semiannual promotion plan which has operated in the white schools since 1913–14 should be extended to the negro schools as well. Under the plan which now prevails in the negro schools, a child who fails in his work is obliged to repeat the work of the entire year; whereas, with the white children, under the semiannual promotion plan, a failure requires the repetition of but one term of school work.

20. *Content of school courses.*—Every effort should be made by teachers to enrich the content of their instruction. This means that textbooks must be supplemented by material gained from other sources. A good working library of well-selected books and periodicals is indispensable to good teaching. The people of the city should be urged to provide such a library at public expense. In addition, school libraries should be built up in each school comprising material which will supplement the work of the school. In the high school a room should be equipped as a library and the pupils encouraged to make constant use of it in the preparation of the class work. Teachers familiar with modern library methods should be placed in charge in rotation. For the discussion of this recommendation, see pages 119–125.

21. *Junior high school.*—If the committee's recommendation that the seven–four grouping of grades, which now obtains in Columbia, be changed to the six–three–three arrangement, then a junior high-school building will be needed at some central point where the seventh, eighth, and ninth grades of the entire city can be congregated. A site separate from the senior high school would be ideal and much to be desired. On grounds, however, of economy such a building could be erected on the present high-school site.

Through the erection of a junior high-school building and the withdrawal of the seventh grades from the elementary schools and of the eighth and ninth grades from the high school, it is believed that suffi-

cient room would be secured to care for the normal growth of the city for a number of years.

The committee also recommends that in the rebuilding of the Howard School for the negroes, suggested elsewhere, provision be made for a junior high-school department.

For details concerning these recommendations see the report, pages 161–166.

22. *School publicity.*—The committee thinks it probable that Columbia is not fully awake to the work of its schools or to their needs. It is the business of the school officials to keep the people fully informed as to both matters. No opportunity should ever be neglected for directing the active and interested attention of the community to the schools in order that adequate maintenance shall be assured. Instead of trying to reduce expenditures at every turn, thus crippling the work, the board of school commissioners should be aggressively endeavoring to raise sufficient funds to carry on public education in the manner demanded by present-day ideals and conditions. This matter is discussed more fully on pages 27–29 of this report.

From time to time, in his annual report to the board, the superintendent has made wise recommendations for the improvement of the schools. In many instances these have not been adopted, presumably for lack of funds. The committee suggests that the board could easily have made these obviously urgent recommendations the basis of a campaign of publicity in the community which in the end would have brought the necessary maintenance increase.

It is generally admitted among students of educational administration that boards of education, responsible as they are for the character of the work of their schools, should have the power to levy taxes for their support, to the end that there may be sufficient funds to carry out their policies effectively. In many places this is now the actual practice.

23. *Regarding Columbia's ability to inaugurate this program.*—Of the 213 cities of the United States listed by the Census Bureau as having a population of 30,000 or more, Columbia stands third from the bottom in the proportionate part of the annual city expenditure which goes to the support of her schools. She stands fifth from the bottom in the actual amount per capita of population which is diverted to the schools. Her school expenditure, proportionate to the expenditures for other municipal departments, would have to be increased one-half to bring her up to the average of the cities of 30,000 population or more. If Columbia doubled her school maintenance, and then added to this $3 per pupil in average daily attendance, she would just reach the average expended per pupil in average daily attendance by the 1,233 cities of the United States having a population of 5,000 or more. She would have to increase her school ex-

penditure by 42 per cent to reach the average expended per pupil in average daily attendance by the cities of the South Atlantic States having a population of 5,000 or more.

Of the 179 cities listed by the United States Commissioner of Education as having a population ranging from 25,000 to 100,000, only two expended a smaller aggregate in 1915–16 for schools than did Columbia. One of these two cities, however, had less than one-half the number of school children which were enrolled in the Columbia schools and the other had less than two-thirds as many. For the same year the average aggregate amount expended by the 372 cities of this country having a population between 10,000 and 25,000 (a class of cities below that to which Columbia belongs) exceeded the total amount expended by Columbia for her schools by $15,457.

The true tax rate of Columbia for all purposes comes within three numbers of being the lowest of all the cities of the United States having a population of 30,000 or over. Yet in actual assessable values, per capita of population, Columbia exceeds all but 11 of the 213 cities having a population of 30,000 or above.

Inasmuch, then, as Columbia is one of the 12 richest cities in the United States in property values, per capita of population, the committee has no hesitation in saying that Columbia can well afford to carry into effect the recommendations made in this report.

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DEPARTMENT OF THE INTERIOR
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BULLETIN, 1918, No. 29

AMERICAN AGRICULTURAL COLLEGES

A STUDY OF THEIR ORGANIZATION AND THEIR REQUIREMENTS FOR ADMISSION AND GRADUATION

By CHESTER D. JARVIS
SPECIALIST IN AGRICULTURAL EDUCATION
BUREAU OF EDUCATION

WASHINGTON
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No. 27. Rural teacher preparation in State normal schools. Ernest Burnham.
No. 28. The public schools of Columbia, S. C.
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No. 30. Resources and standards of colleges of arts and sciences.
No. 31. The educational system of South Dakota.
No. 32. Teaching American ideals through literature. Henry Neumann.
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No. 34. Monthly record of current educational publications, October, 1918.
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No. 36. Educational directory, 1918-19.

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penditure by 42 per cent to reach the average expended per pupil in average daily attendance by the cities of the South Atlantic States having a population of 5,000 or more.

Of the 179 cities listed by the United States Commissioner of Education as having a population ranging from 25,000 to 100,000, only two expended a smaller aggregate in 1915–16 for schools than did Columbia. One of these two cities, however, had less than one-half the number of school children which were enrolled in the Columbia schools and the other had less than two-thirds as many. For the same year the average aggregate amount expended by the 372 cities of this country having a population between 10,000 and 25,000 (a class of cities below that to which Columbia belongs) exceeded the total amount expended by Columbia for her schools by $15,457.

The true tax rate of Columbia for all purposes comes within three numbers of being the lowest of all the cities of the United States having a population of 30,000 or over. Yet in actual assessable values, per capita of population, Columbia exceeds all but 11 of the 213 cities having a population of 30,000 or above.

Inasmuch, then, as Columbia is one of the 12 richest cities in the United States in property values, per capita of population, the committee has no hesitation in saying that Columbia can well afford to carry into effect the recommendations made in this report.

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LETTER OF TRANSMITTAL.

DEPARTMENT OF THE INTERIOR,
BUREAU OF EDUCATION,
Washington, D. C., June 28, 1918.

SIR: By what has come to be known as the first Morrill act (July 2, 1862), the Congress of the United States appropriated to the several States for the establishment and maintenance of colleges of agriculture and mechanic arts public lands from the proceeds of which they now receive a total annual income of approximately $900,000. Through later acts of Congress (1890 and 1907) the Federal Government appropriates for the further support of these institutions the sum of $2,500,000 annually. The institutions receiving aid from these appropriations are more closely allied and have more common interests than any other group of colleges in the United States and have come to be looked upon as in some measure a national system of higher education. To assist the responsible officers of these institutions in their task of constant readjustment of organization and management on the basis of changing conditions and needs, and to give to officers of secondary schools and to the general public information about the requirements of these colleges for admission and graduation, I recommend that the manuscript transmitted herewith be published as a bulletin of the Bureau of Education. The manuscript is the result of a study made at my request by Dr. Chester D. Jarvis, the bureau's specialist in agricultural education.

Respectfully submitted.

P. P. CLAXTON,
Commissioner.

THE SECRETARY OF THE INTERIOR.

INTRODUCTION.[1]

The present pamphlet has been prepared for the special use of persons charged with the administration of agricultural colleges. Inasmuch as it shows in tabulated form the practice of the various colleges concerning the distribution of required subjects, committees on "courses of study" should find it useful in planning curricula. Principals of secondary schools, also, should find in this bulletin much information that may aid them in advising their students with regard to the curricula offered by the various colleges.

The bulletin comprises three parts. Part I comprises general discussions and tabulations concerning the government and organization, and the agricultural curricula offered by each institution. Part II pertains to the requirements for admission, and Part III to the requirements for graduation. In the appendix, page 97, will be found tabulated outlines showing the scope and credit value of the graduation requirements for the several institutions. Where the method for awarding credit differs from that adopted here as a basis for comparison, the adjusted credit value of the work is shown along with the institution's credit value. Summary deductions will be found on pages 16, 31, and 59.

The tabulations presented are based upon individual statements concerning the several institutions. These statements were prepared from information contained in the latest college catalogues on file (usually those announcing courses for 1917–18), from Government reports, and from information obtained by direct correspondence. The statements were sent to the respective institutions for verification. In all but four cases the statements were verified and returned. In the cases of the four colleges failing to return the statements they were assumed to be correct. In a few cases catalogues have been received after the completion of the manuscript, but since alterations in the individual statements at that time would have necessitated the remaking of the tables, no attempt has been made to alter the records in harmony with the later catalogues. In most cases, however, the statements were modified by the college officers to harmonize with forthcoming catalogues.

[1] Any disagreement from present practices found in this document may be accounted for in the delay in publication incident to the priority demands of emergency matters. The manuscript was presented for publication in December, 1917

The investigation embraces all of the land-grant colleges (act of 1862) offering courses in agriculture, except those for the colored race. In the latter the conditions are so different that there would be little gained from bringing them into comparison with the other colleges. As a class of public institutions, however, they offer a splendid opportunity for a similar study.

A study similar to the present one was undertaken a few years ago by Prof. F. B. Jenks,[1] while employed by the Bureau of Education. The data collected at that time have been placed at the writer's disposal and have proved extremely valuable, especially from an historic standpoint.

[1] A preliminary report of Prof. Jenks's study was presented at the Atlanta meeting of the Association of American Agricultural Colleges and Experiment Stations and forms a part of the report of proceedings for the year 1912.

AMERICAN AGRICULTURAL COLLEGES.

A STUDY OF THEIR ORGANIZATION AND THEIR REQUIREMENTS FOR ADMISSION AND GRADUATION.

PART I.—ORGANIZATION OF LAND-GRANT COLLEGES.

GOVERNING BOARDS.

There appears to be great diversity in the form and character of the governing bodies of the several institutions under discussion, but when compared with that of the generally endowed institutions, they show a remarkable uniformity. The greatest variation is found in the name, which is of little consequence, and in the number of members.

Name of governing boards.—Reference to Table 1 shows that in 23 institutions the governing body is known as the "board of trustees"; in 12 institutions it is designated as the "board of regents"; in 4 it is the "State board of education"; in 3 the "State board of agriculture": and in each of the remaining 8 institutions a distinct designation is in use. In all, 12 different names are applied to the governing bodies of the land-grant colleges.

Size of governing boards.—The number of members on the several boards varies from 4, which constitutes the Kansas State Agricultural College board, to 41, which comprises Rutgers College board. The median[1] number of members is 10. Eight institutions have boards of 5; two, boards of 6; four, boards of 7; two, boards of 8; seven, boards of 9; four, boards of 10; three, boards of 11; two, boards of 12; five, boards of 13; two, boards of 15; and the remaining ten have boards of 17. 18, 18, 20, 23, 31, 32, 32, 40, and 41 members, respectively.

Ex officio members of governing boards.—Thirty-three institutions have ex officio members on their boards. The number of ex officio members varies from 1 to 11, the median number being 2. Seventeen institutions have no ex officio members on their boards; 7 have 1; 12 have 2; 6 have 3; 5 have 4; and the remaining 3 have 7, 8, and 11, respectively.

[1] The "median" number is the middle number in a series arranged in order of magnitude.

In 24 instances the governor of the State is an ex officio member. In 25 cases the superintendent of public instruction, or a similar official with a different title, is an ex officio member. In 13 cases the president of the college or university is an ex officio member. A great many other State officials, such as the lieutenant governor, the chief justice, the attorney general, the secretary of state, the State treasurer, and the speaker of the assembly, are occasionally ex officio members. In many cases, the State board of agriculture and the State grange are represented by an ex officio member.

In several cases certain ex officio members are denied the voting privilege. This more frequently applies to the president of the institution, but sometimes includes the governor and other officials. Information is incomplete with regard to this point, but such cases as are known to exist are indicated in the table.

Method of appointing board members.—In 44 cases the governor, by constitutional authority, appoints all or a portion of the members. Although not always indicated, such appointments are frequently subject to the approval of the State senate. Where this is known to be the case, it is indicated in the table. In six institutions, one or more members are elected by the alumni. In some cases, the members nominated by the alumni must be confirmed by the governor. The members of the board of the University of Vermont are chosen by the State legislature. In four institutions, all or part of the members are chosen by the board itself. For four institutions, Illinois, Michigan (Agricultural College), Nebraska, and Nevada, the members of the board are elected by the people. In Oklahoma Agricultural and Mechanical College, also, the president of the board, who is a salaried officer, is elected by the people. With few exceptions, as shown in the table, the board members of the several institutions are chosen by one of the above methods.

Term of office of board members.—In general, there is considerable uniformity with regard to the term for which members are appointed. In 2 institutions, 3 years is the term; in 12 institutions, 4 years; in 4 institutions, 5 years; in 18 institutions, 6 years; in 3 institutions, 7 years; in 2 institutions, 8 years; in 2 institutions, 9 years; in 2 institutions, 12 years; in 1 institution, 16 years; and in 4 institutions, the members are chosen for life or indeterminate terms. In some institutions, some of the members are appointed for shorter or longer periods, the periods here refer to the majority members. The median term of office is six years.

Political restrictions.—In eight States the law requires that the governing board of the State university or college shall be bipartisan and in six of these cases the number of members that may be appointed from any one political party is designated. Cornell University re-

quires that a majority of the members shall not belong to any one religious sect or of no sect. Wisconsin law requires that two members of the board shall be women. In 37 States there are no political restrictions regarding the appointment of members for governing boards.

CENTRALIZED CONTROL.

The State university has come to be regarded as a part of the educational system of the Commonwealth. In States where there is but one tax-supported institution of higher learning, the problem of administrative control is a simple one. In many States, however, such a happy state of affairs does not exist. The following statement shows in a general way how the several States have organized their higher education:

(1) States having all higher education consolidated in a single university, comprehending all departments provided in the State, with centralized administration and under a single board of control: Arizona, Arkansas, California, Idaho, Illinois, Kentucky, Louisiana, Maine, Minnesota, Missouri, Nebraska, Nevada, Tennessee, Vermont, West Virginia, Wisconsin, Wyoming.

(2) States having a single college (commonly a land-grant college for agriculture and the mechanic arts) and not providing other forms of higher education in a State institution[1]: Connecticut, Delaware, Maryland, Massachusetts, New Hampshire, New Jersey, Rhode Island, Pennsylvania.

(3) States having two State institutions (unless otherwise indicated a State university and a land-grant college for agriculture and the mechanic arts): Alabama, Florida (State University, State College for Women), Indiana (Indiana University, Purdue University), Kansas, Michigan, North Carolina, North Dakota, Oregon, Utah, Washington.

(4) States having three or more State institutions: Colorado, Georgia, Iowa, Mississippi, Montana, Ohio, Oklahoma, South Carolina, South Dakota, Texas, Virginia.

Thus it appears that 25 States provide in one institution whatever higher education is afforded; 10 States maintain two separate institutions, and 13 States maintain three or more higher institutions. Eight of the States maintaining two or more institutions, Florida, Georgia,[2] Iowa, Kansas, Mississippi, Montana, North Dakota, and South Dakota have consolidated higher education under a centralized board of control.

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[1] A number of States partially support higher education in one or more institutions over which they have no control. Such institutions are not regarded here as State institutions

[2] The University of Georgia comprises several quite independent units, each with a distinct board, but all are subordinate to the university board.

INTERNAL ORGANIZATION AND ADMINISTRATIVE RELATIONSHIPS.

During recent years the rapid development of the agricultural colleges, especially with regard to extension activities, has brought new problems and a renewed interest in organization and administration. With greater diversity of interest and with ever-increasing appropriations, calling for larger working staffs, has come a greater need for careful organization and a clearer understanding of administrative relationships.

In the broader aspects, the administrative organization of the several institutions is very similar. While some of the institutions are designated "universities" and others as "colleges," the type of organization of the latter in most cases closely resembles that of the former. In other words, the institutions with the more modest designation usually are made up of two or more major divisions, each with its dean and fairly distinct faculty. In the agricultural colleges of seven States—Connecticut, Georgia, Hawaii, North Carolina, Rhode Island, South Dakota, and Washington—no division of faculty is apparent. In these colleges, however, the agricultural work is administered through the usual administrative divisions—instructional, research, and extension; and in such colleges these are regarded in this discussion as major divisions. Of the 50 institutions, two embrace 13 major divisions, three embrace 12, three embrace 11, one embraces 10, three embrace 9, six embrace 8, five embrace 7, eight embrace 6, and 19 embrace less than 6 major divisions.

In 37 institutions, the agricultural work is administered through three coordinate administrative divisions—resident instruction, research, and extension. The list includes all of the agricultural colleges except those of Georgia, Hawaii, California, Maine, Illinois, Missouri, Nebraska, New Jersey, New York, Ohio, Pennsylvania, Porto Rico, and Tennessee. In four of these—California, Illinois, Missouri, and New York—the work is integrally administered through the heads of the various subject-matter departments. Assumimg that the chief executive officer, the dean, in each of these cases, performs the functions of four offices, the organization is quite similar to that in which the work is administered through the three divisions. In the colleges of Georgia, Maine, New Jersey, Ohio, and Pennsylvania, the extension service constitutes a department, coordinate with subject-matter departments. In Georgia, Hawaii, Ohio, and Porto Rico the experiment station is distinct from the college of agriculture. The Universities of Nebraska and Tennessee recognize the three administrative divisions, but not as coordinate.

Thirty-three of the institutions have adopted the plan of holding extension specialists responsible to the subject-matter departments for the correctness of their teaching. In the remaining colleges,

including those of Arizona, Arkansas, Kentucky, Louisiana, Maryland, Minnesota, Mississippi, Nevada, North Dakota, Rhode Island, South Dakota, Tennessee, Texas, Washington, and Wyoming, the extension specialists are regarded as independent of the subject-matter departments. In most of these cases, however, the specialists are required to conform their teaching to that of the respective departments.

Unlike other institutions of higher learning, the agricultural colleges are called upon to administer three lines of service approximately equal in importance—resident instruction, agricultural extension, and agricultural research. Considerable confusion has resulted from attempts to administer these three kinds of service through the traditional form of organization. As a result of the necessity for promoting agriculture along these three lines and on account of constantly increasing appropriations, large groups of specialists have been engaged to work on each of the recognized agricultural subjects. In the process of development, the department, rather than the individual, has become the unit of organization. This condition has resulted in the development of large departments, which sometimes have been administered more or less autocratically, with a consequent loss of initiative on the part of the individual. In some cases, also, it has resulted in administrative conflict between the department head and the director in charge of the kind of service concerned.

With a view to obtaining a better understanding of administrative relationships in the agricultural college, the committee on college organization and policy of the Association of American Agricultural Colleges and Experiment Stations asked the United States Bureau of Education to make a study of the agricultural college organization. A complete report of the findings, with a tentative set of recommendations, was made to the committee in November, 1916. One year later, at the time of their meeting in Washington, the committee after some discussion and amendment, embodied the recommendations in their report, which was accepted by the association.[1]

AGRICULTURAL CURRICULA, DEGREES, AND CERTIFICATES.

GRADUATE WORK.

Forty-four institutions offer opportunity for graduate instruction in agriculture. The six agricultural colleges that do not offer such work are those of Arkansas, Colorado, Connecticut, Porto Rico, South Carolina, and Utah. Thirty-four offer only a master's degree and 10 offer a doctor's degree. The land-grant institutions

[1] These recommendations are elaborated in Higher Education Circular No. 8 of the United States Bureau of Education.

offering doctor's degrees for work in agriculture are those of California, Illinois, Massachusetts, Minnesota, Missouri, Nebraska, New Jersey, New York, Ohio, and Wisconsin.

There is a remarkable uniformity in the use of degree titles. In all cases the doctor's degree is designated as Ph. D. The Massachusetts Agricultural College offers in addition the degree D. Agr., the requirements for which are similar to those for the Ph. D. except that an accepted amount of successful professional experience is necessary. The master's degree in 28 cases is designated as M. S. In 6 cases it is designated M. S. A. and in 6 other cases as M. S. Agr. Rutgers College uses the designation M. Sc. Massachusetts Agricultural College offers in addition the professional degree M. Ar., Michigan Agricultural College offers several professional degrees, such as M. Agr., M. Hort., M. For., and M. V. S. The University of Missouri offers the same advanced degrees, A. M. and Ph. D. in agriculture as in other branches. It also offers an M. F. (master of forestry) degree. Cornell offers an M. L. D. (master of landscape design) degree. (See Table 2.)

FOUR-YEAR CURRICULA.

As shown in Table 2, all the colleges offer four-year curricula leading to the bachelor's degree. In 40 cases the simple title B. S. is used. In 4 cases the designation is B. S. A., and in 5 cases it is B. S. Agr. Georgia State College and the University of Missouri offer degrees with a distinct designation, B. S. For., for graduation in forestry. In Iowa State College, the degree indicates the subject of specialization, such as B. S. in A. E., B. S. in A. H., B. S. in Hort. for specialization in agricultural education, animal husbandry, and horticulture, respectively.

Major options and opportunities for specialization.—In Table 3 an effort has been made to show the opportunities for specialization offered by the several colleges. An average of eight opportunities for specialization are offered by the colleges. In many cases, especially in the large universities, opportunity for specialization is even greater than is indicated by the table. In most cases a definite number of major options are open for election, but in a few of the larger universities, notably California, Illinois, Cornell, Ohio State, and Wisconsin, students may specialize in any department of the college of agriculture, or even in some particular phase of the work of a department. In these cases the common practice is to require students to carry a minimum amount of work in the major subjects and sometimes one or more minor subjects, but in a few cases the selection of courses in the subject of specialization is left to the student and his adviser. In the institutions where the major option plan is in operation, the common practice is to prescribe most of the

work within each option, but in many cases the major option schedules are regarded only as suggesting suitable combinations.

It may be seen from the table that California and Cornell offer 22 and 21 opportunities, respectively, for specialization. Oregon and Massachusetts Agricultural Colleges and Illinois and Wisconsin Universities offer 15 or more opportunities. Nine other institutions offer 10 or more, 23 others offer 5 or more, and the remaining 12 offer less than 5. Animal husbandry, agronomy, horticulture, dairy husbandry, and agricultural education occur most frequently among the major options. Forty-four institutions offer options in animal husbandry, 43 in agronomy, 37 in horticulture, 31 in dairy husbandry, and 25 in agricultural education. A former inquiry revealed the fact that 40 of the colleges provide for specialization in agricultural education, so that 15 of the institutions offer sufficient elective work in connection with other options to enable students to carry the required number of educational courses to qualify for State teachers' certificates.

Although 24 different options are listed in the table, 10 institutions offer options in unlisted subjects. Arkansas offers one in professional agriculture. California offers opportunities for specializing in citriculture, in nutrition, and in viticulture and enology. Kansas State Agricultural College offers an option in the milling industry; Maryland State College one in the canning industry; Massachusetts Agricultural College one in rural sociology; Michigan Agricultural College one in apiculture; University of Minnesota three in different phases of forestry; Cornell one each in meteorology and extension teaching; College of Hawaii one in sugar technology; and the University of Vermont one each in plant industry and animal industry. Among the unusual options listed in the table, attention is called to that of agricultural journalism, offered by Massachusetts Agricultural College and by the University of Wisconsin, and to that of genetics offered by California, Cornell, and Wisconsin.

SECONDARY CURRICULA.

Most of the institutions offer three, two, or one year curricula for the benefit of persons who do not care to spend four years at college or who are unable to meet regular entrance requirements. Such curricula usually contain a larger proportion of technical work and a smaller proportion of academic work. In some cases, students in these shorter curricula are given an opportunity of carrying a certain number of courses that may be accepted for regular admission. In most cases, however, work completed in the shorter curricula is not accepted toward satisfying the requirements for graduation in the degree curricula.

These shorter curricula, often designated as "school of agriculture" curricula, extend over one, two, or three years, but each year frequently is of shorter duration than the regular college session. The duration varies from four to nine months.

Reference to Table 2 again will show that 10 colleges offer a three-year curriculum, 24 offer a two-year curriculum, and 6 a one-year curriculum. South Dakota offers a four-year secondary curriculum. In most cases students completing these curricula are given certificates or diplomas with the designation associate. In other institutions, such as Florida and Wisconsin, they are called "graduates" and given such titles as G. F. (graduate in farming) or Grad. Agr.

SHORT CURRICULA.

Thirty-eight colleges offer short curricula either in the winter or summer. Some offer several curricula in various subjects and of varying duration. In most cases these are winter curricula covering periods of from 10 days to 5 months. Many institutions hold six-day conferences known usually as "farmers' week." These or other curricula of less than 10 days are not included in the tabulations. In some cases short curricula are offered during the summer months. South Carolina, for instance, offers special work in cotton grading during the month of August. Texas offers six weeks of the same kind of work during June and July.

In most cases a certificate of attendance is given upon the completion of the various short curricula.

SUMMER SESSIONS.

Thirty-eight of the colleges offer an opportunity for study for a period of from 4 to 12 weeks during the summer. In most cases regular undergraduate courses are offered, so that matriculated students who take them may receive credit toward graduation. Many institutions offer also special curricula for unmatriculated students. Purdue offers a 12 weeks' session; Kansas State Agricultural College and Louisiana State University offer sessions of 9 weeks; the Universities of Illinois, Missouri, and Nebraska, and the Oklahoma College offer sessions of 8 weeks; North Carolina College of Agriculture and Clemson College offer sessions of 4 weeks; and the remaining 29 offer sessions of 6 weeks.

CONCLUSIONS CONCERNING ORGANIZATION.

Government.—During recent years, representatives of the Bureau of Education have conducted several educational surveys, including inquiries concerning the institutions of higher learning. This has afforded abundant opportunity for an examination of the efficiency of various types of governing boards. In the report of the survey

of the University of Nevada [1] appears an extended discussion concerning the nature, powers, and duties of governing boards in general. The committee in charge of this survey sets forth the following general principles:

1. Experience has shown that public administrative boards [2] consisting of from 7 to 15 persons have usually been most successful.

2. The governing boards of State universities should have no connection with partisan politics. This condition is best attained if their members are appointed by some official agent representing the whole community, preferably the governor.

3. University regents should be appointed for long terms.

4. The members of such bodies should receive no compensation beyond their necessary traveling expenses.

5. Members of a university board of regents should be representative citizens, persons of enough education to enable them to form competent judgment on questions of university policy, preferably in a majority of cases university graduates; but not educational experts.

6. The scope of the board's activities should be strictly limited, either by law or by board ruling, to the determination of the general policies of the institution or institutions under its control, in consultation with the executive officers; the appropriation of moneys or the approval of the distribution of appropriations made by public appropriating bodies; and the appointment of institutional employees on the recommendation of the institutional executives. In other words, the function of the governing board is, in the broadest sense of the word, legislative.

This statement of principles should be studied in connection with the committee's full discussion, which makes it clear that there may be many efficient governing boards whose form differs from that suggested, and that the recommendations are intended only for those States or institutions contemplating a reorganization of their boards.

Centralized control.—As a result of the bureau's investigation of the higher educational systems of several States and in the light of experience and theoretical considerations, two principles for the organization of higher education may be suggested: (*a*) Whenever possible, all higher education, other than that of the normal schools, should be consolidated in a single State university; (*b*) whenever two or more higher institutions are established, they should be under common control and should be assigned definite fields to insure appropriate coordination and to prevent wasteful duplication of courses or departments.

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[1] U. S. Bureau of Education, Bulletin 19, 1917.

[2] This refers to boards which exercise legislative functions only. Executive boards whose members devote their whole time to the work of administration (such as the Kansas State board of administration) are not taken into account in this statement of principles.

Internal organization.—The following set of recommendations was prepared by the Bureau of Education, and after minor changes, as shown by the italicized phrases, was accepted by the Association of American Agicultural Colleges as a part of the report of its committee on college organization and policy for the year 1917:

1. That the individual specialist, *capable of working independently*, should be regarded as the unit of organization.

2. That the group of working specialists on any one of the recognized subjects, regardless of the kind of service, should constitute the subject-matter department.

3. That specialists should devote their time mainly to one kind of service, but provision should be made for exchanges for the mutual advantage of each.

4. That one member of each department should be designated as chairman, *or administrative head.*

5. That the members of the subject-matter department should be given a voice in the designation of their chairman *or administrative head.*

6. That authority for subject matter should be confined to the group of specialists comprising the subject-matter department, and that administative control should be limited to the amount and method of work.

7. That the distribution of administrative authority should be on the basis of the kind of service.

8. That the three kinds of service, each in charge of a secondary administrative officer, should be coordinated under a chief executive who, in the case of a large institution composed of several faculty groups, should be an officer other than the president.

9. That the official designation "dean" in an agricultural college should be applied only to the chief executive officer who is responsible for the coordination of the three phases of agricultural service, and that of "director" should be applied to the coordinate officers in charge of each of the three lines of service—resident instruction, research, and extension.

10. That when one individual performs the duties of two or more offices his official designation should identify clearly the officer with the respective offices assigned.

11. That the leaders in charge of the various phases of the extension service should be regarded as administrative officers and should not usurp the duties of the specialists in the various subjects. Where an individual serves both as specialist and administrative leader, a dual responsibility should be recognized.

12. That in the promotion of extension projects controlled by either connected or cooperating colleges, the same administrative relations with the subject-matter departments concerned should exist as with departments that are organically connected.

13. That incoming correspondence, except that of an administrative nature, should be referred to the subject-matter departments concerned, and there referred to the individual best qualified to supply the information called for.

14. That specialists, in whatever kind of service, should be on an equal basis from the standpoint of rank and official designation. If differentiation of extension and research specialists is desirable, the prefixes "extension" and "research," respectively, may be used in connection with the customary professorial titles.

PART II.—REQUIREMENTS FOR ADMISSION.[1]

METHODS OF ADMISSION.

In each of the 50 institutions applicants are admitted by either examination or certificate. In most cases examinations may be taken either under the immediate direction of the institution or under the direction of certain examining boards. In several cases, however, the institutions do not offer entrance examinations and applicants for admission by examination are required to take the examinations of the college entrance examination board of their respective regions.

Larger proportions of students each year are being admitted by certificate. The lists of approved high schools are constantly becoming larger and the reciprocal relations between college and high school are being gradually improved. In many cases the State colleges and universities are cooperating with the State departments of education with a view to bringing about a practical basis for articulation between secondary and higher education. Such cooperation in some cases consists of inspecting and approving of the various secondary schools with a view to establishing lists of accredited schools. The colleges have profited by this contact with the high schools, and have modified their requirements to meet the popular demand. High schools also have been benefited by the contact with the colleges, and they are fast becoming liberally standardized. Although standards are somewhat variable, an "accredited high school" in most States is one which attains certain prescribed standards of equipment, teaching force, and efficiency, and administers in a satisfactory manner a four-year plan of study in advance of the eighth grade or grammar-school studies, and including usually four years of English, three years of mathematics, three years of history, three or four years of foreign language, and two years of science, and requires for graduation 15 or 16 units of work.

Certificates are accepted generally from not only the high schools that are accredited by the institutions themselves but from high schools that are accredited by State colleges and universities in other

[1] The present discussion of the requirements for admission concerns the requirements for admission to the agricultural curricula only.

States. Students from district or county agricultural schools, from normal schools and from other colleges are admitted generally by certificate.

AGE REQUIREMENTS.

In 28 of the institutions there is a definite minimum age limit for admission to freshman standing. In 24 of these the limit is fixed at 16 years; in 2 institutions it is 15 years; in 2 others it is 14 years. In 22 institutions there is no fixed age limit. The minimum age limit for women in 2 institutions is 17 years. In the other institutions the age limit is the same as for men. (See Table 4.)

For admission as special or unclassified students, 25 of the institutions require applicants to be at least 21 years of age; 9 require them to be at least 18 years of age; and the remainder publish no special age restrictions. As a rule this age limit applies to applicants who are unable to meet entrance requirements, but in many cases applies to all applicants to special classification.

For applicants for admission to the short curricula, the same age restrictions generally are applied as for regular freshman classification, but sometimes the age limit is slightly in advance.

OCCUPATIONAL EXPERIENCE REQUIREMENTS.

In none of the institutions is farm experience a rigid requirement for admission. In the University of Missouri, New York State College of Agriculture, and Clemson College, one year's farm experience is listed as a requirement, but in each case opportunity is provided for the making up after entering of any deficiency in this respect. In 18 institutions farm experience in varying amounts is required sometime before graduation. In most of these cases students are strongly advised to obtain such experience before entering. Deficiency in this requirement is usually made up either on the college farm or on an approved farm away from the college. Many of the institutions, although not requiring farm experience either for admission or graduation, strongly advise applicants for admission to obtain at least one year's experience on a farm before entering.

There is a growing tendency to increase farm experience requirements. The recent ruling of the Ohio State University expresses the changing attitude of many of the stronger colleges, especially those of the North:

> As a prerequisite for graduation in all the courses in the college of agriculture, excepting home economics, students graduating in June, 1919, must have had one summer of farm experience; those graduating in 1920, two summers of farm experience; 1921, three summers of farm experience; and 1923, one full year of farm experience. This requirement shall be interpreted as meaning actual work done in residence on the farm. The one year requirement, when effective, must be met before the student is permitted to register for his junior year.

In some of the institutions, especially in the East, at least half of the students in agriculture have matriculated without having had any experience on a farm. In one institution the proportion runs as high as 65 per cent. The students in many cases come from large cities, and they are not only deficient in a knowledge of farm operations, but they are completely ignorant of country life conditions. The practice of turning out graduates with no more practical experience than is obtained at odd times on a college farm, or even that obtained during summer vacations, is beginning to have a detrimental effect upon the institutions and, for this reason, the colleges are emphasizing more and more the necessity for a fair amount of occupational experience before entering college.

The need for strengthening and enforcing the requirements pertaining to practical experience is becoming more urgent since the colleges are expected to train teachers of agriculture for the secondary schools. The unpractical character of the agricultural instruction in the high schools has been the cause of the disappointment so frequently experienced by well-meaning school boards in progressive communities. Many of the agricultural graduates who have not had farm experience and who have lacked the ability and opportunity to follow the farming occupation have obtained positions as teachers. Such positions, on account of insufficient compensation, have failed to attract the men with experience in farming.

There is no doubt that the colleges are convinced of the desirability of enforcing the requirement for previous farm experience, but there is a belief on the part of many that such a ruling would cause many prospective students, who are deficient in this respect, to turn to other institutions where there are no such restrictions. The remedy, therefore, calls for either unanimous action on the part of the colleges concerning the practical experience requirements, or a more efficient method for providing the necessary practice in farm operations and the closer contact with the affairs of country people.

SCHOLASTIC REQUIREMENTS.

The unit system for college entrance.—The proper adjustment between college and high school is one of the important contemporary problems in education. Great improvements have been made during recent years, and there are indications that the next few years will mark even greater advances toward a more complete college and secondary school articulation. The fear on the part of many colleges that a greater liberality concerning entrance requirements may be looked upon as a lowering of standards seems to be a retarding factor in the movement. A thorough understanding of present conditions should serve as a foundation upon which certain classes of institutions may establish common standards and thus eliminate undesirable competition.

The introduction of the unit system has had a marked influence upon improved relationships between college and high school. The system, of course, has been abused in some instances. Some high schools are endeavoring to maintain an 18-unit standard and some colleges are endeavoring to maintain a 16-unit entrance requirement. Most institutions, however, both colleges and high schools, appreciate the danger in multiplying units for entrance at the expense of thoroughness of preparation. The unit system is based upon the principle that there is a given time at the disposal of high school students and that 16 units represents the maximum amount of work that they may be expected to accomplish satisfactorily during that time. It may be assumed also that a student who confines his attention to a few subjects during his limited school career is better prepared, either for self-support or for college, than one who during the same period has studied many subjects. The time applied to study, rather than the number of courses carried, is a better measure of a student's preparation and his fitness to enter college.

It is apparent from the present study that the great need concerning high school and collegiate articulation is for a better understanding of what constitutes adequate training for the bachelor's degree. The requirements for the eight-year period, represented by the high school and collegiate courses, should be considered as a unit. Some progress already has been made in this direction. The University of California, for example, has unified the high school and junior college work, which serves the purpose well. Each State, it would seem, should provide a statement showing what are believed to be suitable sequences for each line of specialization offered by its higher institutions. Such a statement should be of service to high-school officers in arranging appropriate schedules, and should enable students to determine definitely the ground that they must cover before graduation from college. It should tend also to eliminate the necessity for admitting to college such large numbers of "conditioned" students as are now admitted. This subject is more fully discussed in the following section (see p. 59).

Catalogue standards for admission, of course, are oftentimes quite different from those actually enforced. There are probably none of the State institutions whose paper standards are so meaningless as to admit deficient students without "conditions," but there are many colleges requiring theoretically 14 units for entrance that make a practice of admitting students conditionally who are deficient in two or more units. Since many of the conditioned students are bonafide graduates of high schools, either a relaxa-

tion in the amount of prescribed work or a liberalizing of the range of optional subjects would result in fewer conditioned students and consequently in less time being spent in making up entrance work, which may be of less value to the student than some regular college courses.

NUMBER OF UNITS REQUIRED FOR ADMISSION.

As may be seen from Table 4 all of the colleges, except three, require for regular admission a minimum of 14 units, which is regarded as the minimum number required by standard colleges. Included among these is the Connecticut Agricultural College which does not admit students on the unit basis, but requires four years of high-school work. By deducting from the total requirement the number of conditional units approved by the several colleges, the result is quite different. In a few cases students deficient in prescribed work only are admitted conditionally, but in many cases students who are from one to three units short in total requirements are so admitted. Most colleges publish statements showing the maximum number of units for which applicants may be conditioned. Others simply state that deficient students may be admitted conditionally. Assuming that the latter approve of one unit deficiency, the following statement shows the number of institutions in the various classes, based upon the number of units required for admission, both before and after deducting the number of deficient units approved:

Distribution of the colleges according to their gross and net requirements for admission.

Entrance units.	Number of institutions.	
	Before deducting deficient units approved.	After deducting deficient units approved.
16	2	1
15	30	9
14½	2	1
14	12	15
13	0	10
12	2	11
12½	0	1
11	1	1

During the past five years, as shown in Table 5, there has been a conspicuous increase in the number of colleges requiring 14 units for entrance. For the year 1912–13, only 34 of the 50 institutions required a minimum of 14 units for entrance, while at the present time, as shown above, 47 claim to be on this basis. As a result of

this, the median requirement for entrance has been raised from 14 in 1912–13 to 15 in 1917–18. This increase in requirements has been made possible to some extent by substituting vocational subjects for certain academic subjects, which seems to indicate a general liberalizing of the college entrance requirements.

PRESCRIBED SUBJECTS.

The subjects that are prescribed for entrance by the several colleges are shown in Table 4. In general, the number of subjects that are prescribed for college entrance is decreasing, and the number for which entrance credit may be granted is increasing. Table 5 shows, among other things, a comparison of the number of prescribed units for the years 1912–13 and 1917–18. The median number of prescribed units for the former year is one-half unit higher than that for the latter. By eliminating the institutions requiring less than 14 entrance units there is a difference of one unit, the median number of prescribed units in 1912–13 being nine and in 1917–18 eight.

Only five subjects are found in the list of those that are designated as prescribed. These are English, foreign language, social science, mathematics, and natural science. One institution, Clemson College, prescribes agriculture, but this is listed in the table under science.

Of the 48 institutions[1] all prescribe *English*. The amount of preparation in this subject varies from one to four units, but 42 colleges have a fixed three-unit requirement. The University of Minnesota and New Mexico College of Agriculture require four units, but in the former case four units of foreign language may be substituted for the fourth unit of English. The universities of California, Ohio, and Wisconsin require but two units of English, and Mississippi Agricultural and Mechanical College requires two and one-half units.

Only 18 institutions prescribe *foreign language* for entrance, and, with two exceptions, all require but two units in this subject. The agricultural colleges of New York and North Dakota require three units. Two other institutions, University of Florida and Maryland State College, list foreign language as a required subject, but provide for substitutions. Many of the institutions requiring this subject stipulate that not less than two units may be offered in a single language. Some accept a third unit in a second language. In this connection it is interesting to note that 23 of the colleges do not require foreign language either for admission or graduation. In the year 1912–13 twenty of the colleges required this subject for admission, which shows that even though many institutions have raised

[1] Connecticut Agricultural College and the University of Porto Rico admit to freshman standing graduates of any four-year high school, and their requirements are not on the unit basis. For this reason these institutions are omitted from this discussion.

their entrance requirement, fewer institutions require foreign language now than five years ago.

Thirty-six institutions prescribe *history or social science.* The amount of preparation required in this subject is either one or two units, 28 requiring one unit and 8 requiring two units. In 1912–13 only 32 of the institutions prescribed preparation in history. There seems to be a tendency, therefore, to emphasize the necessity for better high-school preparation in this subject.

All institutions prescribe *mathematics*, and the amount of preparation specified varies from one to three and one-half units. One institution, the University of Missouri, requires but one unit. Two units are required by 26 institutions, two and one-half by 16 institutions, three by three institutions, and three and one-half by two institutions. Eleven institutions do not indicate how much preparation is required in either branch of the subject. Presumably they are willing to accept in any proportion any phase of the subject commonly taught in high schools. Of the 37 institutions that portion their requirements, 18 specify a minimum of one unit in algebra, 17 a minimum of one and one-half units, and two a minimum of two units. In geometry, 32 institutions specify a minimum of one unit, 4 specify one and one-half units, and one requires no geometry. Fourteen institutions specify a combination of one and one-half units in algebra and one unit in geometry, while 18 others specify one unit of each. In one institution, Alabama Polytechnic Institute, advanced arithmetic to the extent of one-half unit is required. It is possible also that some of the institutions that fail to apportion their requirements in mathematics accept advanced arithmetic, or arithmetic review, to meet the general requirements in mathematics. In general, however, it may be assumed that these institutions require one to one and one-half units of algebra and one unit of geometry.

Thirty-three institutions require preparation in *physics or other sciences.* Two require three units, five require two units, and 26 require but one unit. Nine of these institutions specify one unit in physics. One other institution, University of Tennessee, also requires that an unspecified amount of preparation in physics be included in the three-unit requirement in science. In at least one institution, University of Idaho, agriculture may be included in making up the requirements in science. Clemson College specifies one unit in agriculture. Many of the institutions specify that notebooks showing laboratory exercises shall accompany requests for science credit.

The following statement summarizes the prescribed requirements for admission:

Distribution of the colleges according to the work prescribed for admission.

Prescribed work.	Number of colleges.	Prescribed work.	Number of colleges.
English	48	History of social science	36
4 units	2	2 units	8
3 units	42	1 unit	28
2 units	4	0 units	12
Modern language	18	Science (including physics)	33
3 units	2	3 units	2
2 units	16	2 units	5
1 unit	0	1 unit	26
0 units	30	0 units	15
Mathematics	48	Physics	9
3½ units	2	1 unit	9
3 units	3	0 units	39
2½ units	16	Agriculture	1
2 units	26	1 unit	1
1½ units	0	0 units	47
1 unit	1		

The total number of prescribed units ranges from 4, required by the University of Missouri, to 10½, as required by both Maryland State College and Rutgers College. The median number of prescribed units is 8. Four institutions require exactly the median number, while 22 require less and 22 require more than this number. This presentation is somewhat misleading on account of the institutions falling naturally into one of two groups—those that do and those that do not require foreign language. In the one case the median number of prescribed units is 9, and in the other case the median number is 7. The accompanying diagram (fig. 1) represents the frequency of the totals prescribed for admission.

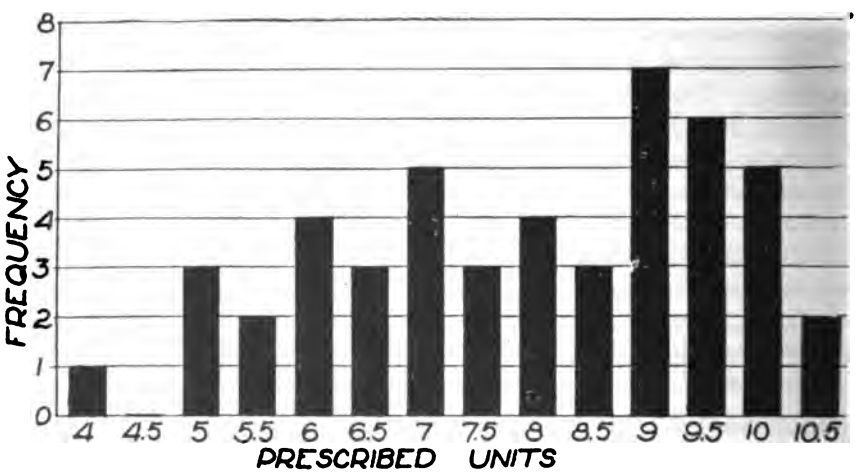

FIG. 1.—Distribution of the agricultural colleges according to the number of prescribed units in their requirements for admission.

OPTIONAL SUBJECTS.

The number of optional units required by the various colleges to satisfy the total requirement is inversely related to the number of prescribed units. The range is from 2½ to 11, and the median number is 6½. The conspicuous feature concerning "optional requirements" is the growing liberality of the institutions, as shown in Table 4, with regard to the number of optional units that may be offered in vocational subjects. In 23 institutions there is practically no limit to the number of optional units that may be offered in vocational subjects. In 15 other institutions four or more units may be offered in vocational subjects. In only 10 cases is the number limited to less than four.

Many of the institutions conspicuously publish the statement that any well-taught, high-school subject may be offered. The following statement of the University of Missouri will serve to show the attitude of a large proportion of the institutions:

> The university will accept for admission any 15 units from a first grade high school. If the distribution of units does not correspond to that recommended by the college to which the student is admitted, he will be required to carry courses in college to make up the deficiency, and this may delay his graduation.

Connecticut Agricultural College has taken an advanced step in granting freshman standing to any graduate of a four-year high school.

Reference to Table 6 will show that there is a great range of high-school subjects that may be offered for entrance. The subjects are arranged in natural groups, and the credit that may be allowed for each is shown as published in the respective catalogues. In certain subjects there is both a maximum and a minimum credit that may be offered. Whenever both are given in the catalogue, they are listed in the table. When only one figure is given for each subject, it is listed as the maximum except where the contrary meaning is obvious. In many cases, it may be regarded also as the minimum. Some catalogues fail to list the credit value of subjects other than those required for admission. In such cases the required amounts are listed in the table, but it may be assumed that credit in excess of these amounts may be allowed.

In Table 7 an attempt is made to show the frequency of occurrence of the subjects appearing upon the published lists of preparatory subjects accepted for admission. The table is presented to show that the more common high-school subjects are quite generally accepted. Forty of the colleges publish fairly complete lists, and taking this number as a basis, it may be seen that all of them accept English, Latin, Greek, French, German, algebra, plane geometry, physics, botany, Greek and Roman history, medieval and modern history, English history, and American history. At

least 30 of the colleges accept Spanish, solid geometry, trigonometry, physiography or geology, chemistry, zoology, physiology, agriculture, freehand drawing, and manual training or shopwork. At least 20 of the colleges accept advanced algebra, domestic science, and bookkeeping. Ten or more colleges accept ge eral biology, economics, civics, mechanical drawing, domestic art, commercial law, commercial geography, stenography, and music. At least five colleges accept general science, general history, and pedagogy or psychology.

Owing to the gradual introduction of vocational courses into the high schools, there is bound to be much irregularity of preparation during the next few years. Much of the technical work now given during at least the first year in college eventually will be given in secondary schools, and the agricultural colleges during the next few years will be required to adjust their curricula to conform to the gradual modification of those of the high school. This should not be a difficult problem, but during the transition stage it will require considerable duplication of work. In home economics the colleges even now find it necessary to offer certain technical courses, like sewing and cooking, that have come to be regarded as secondary-school courses. In the near future such courses as plant propagation, elementary field and forage crops, types and breeds of live stock, elementary soils, etc., may be regarded in the same way, but for the benefit of the students who have not had such courses, the colleges also will need to offer them.

The vocationalizing of high schools may necessitate also the establishment of liberal standards of preparation that invariably may be enforced. The prescribed work in such standards it seems should include preparation in such subjects as are believed to be prerequisite to collegiate courses and the optional work may include satisfactory preparation in any generally recognized secondary-school subject. It may be desirable to classify the optional subjects, as is sometimes done now, and to require a certain proportion from each group according to the general needs of the curriculum selected. In other words, the secondary school may be expected to prepare the student in a general way for his chosen vocation.

ADMISSION TO ADVANCED STANDING.

Although definite information is lacking, there seems to be much uniformity among the various institutions in the methods of granting advanced standing. In general, two methods are followed: First, by examination, and second, by transfer of credits earned at certain approved institutions. Advanced standing is rarely granted for excess secondary-school work, except by examination. Some institutions, however, on the strength of approved high-school certificates

showing credit for advanced work, admit students to advanced standing. In most cases collegiate credit for excess high-school work is limited to approximately 12 semester hours.

Most institutions grant advanced standing to students from other colleges or universities. Students from State normal schools also are admitted frequently with advanced credit. In most cases, certificates showing an honorable dismissal and a full statement of the student's high-school and collegiate record are required. Full credit is given usually for all work that has been done in the institution from which the student comes, provided such work corresponds to work that may be applied toward satisfying the requirements for graduation in the curriculum for which the candidate desires to register. Any deficiency in entrance requirements is satisfied usually before collegiate credit is granted.

Some institutions, especially the State universities, maintain lists of accredited colleges from which students may be admitted by transfer.[1] The basis upon which such lists are made varies with the institution. Where the lists are limited to colleges of a restricted region, the ratings usually are based upon an intimate knowledge of the institutions' standards, but the more distant colleges usually are accredited according to the ratings of the respective State universities.

In several States a definite cooperative arrangement exists between the State university and a number of smaller colleges and normal schools. Such cooperation provides for the transfer of students with full credit for two years' work from the smaller colleges to the university. In other cases it provides for a mutual exchange of students between two or more institutions at the end of two or three years. This arrangement makes it possible for students to complete their general work of the first two or three years at one institution and their special work at another institution which offers opportunities for specialization along lines not offered by other institutions of the State. Agricultural students, however, seldom avail themselves of this opportunity.

In general, students from other institutions that are admitted to advanced standing are required to complete at least one year's work in the institution from which they expect to graduate.

CONDITIONAL ADMISSION.

As shown in Table 4, it is a common practice to admit conditionally students who are unable to meet all the requirements. Of the institutions requiring 14 units or more for admission only two, University of Maine and Pennsylvania State College, distinctly state that stu-

[1] The lists of accredited higher institutions as maintained by the several State universities and other standardizing associations and foundations have been published by the United States Bureau of Education as Bulletin 17, 1917.

dents are not admitted with "conditions." Colorado State Agricultural College, also, may be included in this category, for such of its collegiate applicants who are unable to fully meet entrance requirements are required to register for and carry preparatory work in the three-year secondary curriculum. Two others, Purdue University and New Hampshire College of Agriculture, state that students who are deficient in any of the requirements are admitted only in exceptional cases. Mississippi Agricultural and Mechanical College, North Carolina College of Agriculture, and Clemson College, or those that require less than 14 units for entrance, do not admit students with conditions, but the first-mentioned institution accepts a one-unit condition in the prescribed work (geometry).

In at least nine cases—the colleges of Georgia, Hawaii, Illinois, Michigan, Minnesota, New York, Oregon, Utah, and Wisconsin—the practice is to admit students who meet the total requirements, but who may be deficient in some of the prescribed work. In two of these cases, Georgia State College and the University of Wisconsin, deficiency in foreign language only is approved. In the college of Hawaii students deficient only in physics, and in the University of Illinois students deficient only in one unit of science, are admitted conditionally. As may be seen from the table, 32 institutions, in addition to those admitting students deficient in prescribed subjects, frankly state that candidates who are unable to meet the total requirement may be admitted conditionally. Three of these fail to state in definite terms the degree of deficiency approved. One approves of two-thirds unit, 9 approve of one unit, 18 approve of two units, and 1 approves of three units deficiency.

It is a common practice in many institutions to accept students who are deficient in preparation into their two-year or three-year (secondary) curricula where an opportunity is offered for carrying certain courses that may be accepted for entrance. Such curricula are designated frequently as the "school of agriculture." As a rule students following this plan are required to spend more than four years for graduation. In a few cases, however, they are allowed to carry certain college courses as well and to receive collegiate credit after being regularly matriculated. Sometimes, for the benefit of graduates of the shorter curriculum who wish to register for a degree course, the institution provides an additional year's work which includes such required entrance subjects as are not given in the so-called "school of agriculture." Such a plan is followed in Colorado, where a three-year curriculum is supplemented with a one-year curriculum. With regard to this practice in Colorado, Dean S. A. Johnson writes:

The school of agriculture does not professedly prepare for college admission. We have so many students in the school, however, who wish to enter college that we

provide what is known as the fourth-year course. This is especially designed to include all those entrance requirements which do not appear in the school of agriculture course of study. The school of agriculture furnishes us about 20 freshmen each year. The work of the boys in the school of agriculture is extremely irregular, owing to the fact that some have had only eighth grade work and others anywhere from one to four years of high-school preparation. It is a task to arrange for the work of those who are desiring college entrance. We do not relinquish any of the requirements for the freshman year or make special concessions to the "school" in the matter of admission.

Although 10 institutions have no fixed time limit for the removal of entrance conditions, the general practice is to require students to make up all entrance deficiencies within one or two years. In one institution, University of Nebraska, the time limit is one semester; in 23 institutions it is one year, in 6 institutions it is two years; and in 2 colleges, Massachusetts and Utah, the limit is four years, or any time before graduation.

When it is understood that in most institutions the minimum requirement for graduation is fixed at a point approximating the maximum amount of work that the normal student can complete within the given time of four years, it is obvious that a student entering with a handicap of two or three units, equal to 12 to 18 semester hours, is likely to remain deficient even at graduation. With the limited information available, it is impossible to determine the proportion of conditioned students who require more than four years for graduation, but the belief is that it is remarkably small. Even though they may have passed all required examinations, conditioned students, on account of being overworked, are not likely to be as well prepared in collegiate subjects as those who enter college without such a handicap. If in some institutions this is not true, it is obvious that the minimum requirement for graduation is too low and that normal students are not making the best use of their time. It is well known, of course, that there is a great difference in students with regard to the amount of work which may be carried successfully, but the exceptionally capable students are not usually found among those who enter with conditions.

CONCLUSIONS CONCERNING REQUIREMENTS FOR ADMISSION.

It should not be understood that the present discussion is an argument in favor of uniform entrance requirements for all of the agricultural colleges. On the contrary, it is believed that in a few of the States conditions are not such as to warrant the adoption of 14 or 15 unit standards. The colleges that are habitually admitting large numbers of students with conditions should frankly announce their willingness to accept students with the equivalent of three years of high-school work if that represents the needs of their constituency. In such cases proper provision should be made for admitting to

advanced standing those who enter with credit for full four years' work. The practice in some institutions of admitting students to regular freshman standing and of making it easy to remove such conditions has had a serious effect upon drawing students from high school before the completion of four years' work. It would seem that in most States the time had come when the colleges can justly abolish conditional admission, except for candidates who are deficient in prescribed subjects.

In some of the colleges conditions may warrant the making provision for a subfreshman class. This seems to be the logical solution of the problem where there is a demand for both low entrance requirements and for a full four-year curriculum of college grade. With such a plan it is possible to maintain collegiate standards, and graduates in going to other institutions are eligible to graduate standing. Such a plan also encourages the development of four-year high schools, for students find little advantage in leaving home to complete their preparatory training. There is always a danger, however, in maintaining subfreshman work after the need for it has disappeared, for such a practice is not conducive to the development of a wholesome collegiate atmosphere.

The present study suggests the following principles concerning scholastic requirements for admission:

1. The colleges should exert an influence upon improving the secondary schools in such a way as to enable them to adequately prepare students for colleges to maintain their usefulness for the mass of students who may never enter college.

2. The colleges should prepare or have prepared lists of approved high schools within their States. To facilitate the classification of students from other States, the standards for approval should conform to generally accepted rules.

3. The colleges should accept to regular freshman standing all graduates from approved high schools.

4. The colleges should prescribe work only in such preparatory subjects as are regarded as prerequisite to the freshman work in the college curriculum for which the applicant seeks admission. In this connection it should be understood that the colleges in accrediting or passing upon the qualifications of high schools have an opportunity for prescribing the general qualification of their prospective students.

5. For the guidance of prospective candidates for the degree of bachelor of science in agriculture, each State should publish a statement showing what is believed to be appropriate sequences of studies and an acceptible amount of coordinated work covering the combined high-school and college periods.

6. Students who fail to meet the regular requirements for admission should not be admitted to freshman standing. If admitted con-

ditionally, or to special or irregular classification, they rarely should be permitted to graduate within four years.

7. To maintain collegiate standards in States where four-year high schools are not common, a subfreshman class should be maintained. Admission to such a class should be limited to candidates from communities that do not fully provide for collegiate preparation.

8. Special classification should not be granted to candidates under 21 years of age unless they satisfy regular entrance requirements.

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PART III.—REQUIREMENTS FOR GRADUATION.

BASIS FOR COMPARISON.

Since there is considerable variation among the several colleges concerning the methods of awarding collegiate credit, the first consideration in the study of the requirements for graduation is to adopt as nearly as possible a common basis for comparison. In the first place, while all the institutions claim to maintain sessions of 36 weeks, there is apparently considerable variation in the number of working days in the college year. The number ranges, as nearly as is possible to determine by comparing catalogues, from 194 to 216 days. Because of its indefiniteness, this variation has been disregarded in the present comparison.

Secondly, the institutions vary with regard to the number of terms in each session, and this is responsible for a variation in the value of the credit unit. In 40 institutions the session is divided into two terms or semesters. In these institutions one hour of class work per week, or its equivalent, for one semester is the credit unit. In 10 institutions the session is divided into three terms, and in such institutions the unit of credit usually is one hour of class work per week, or its equivalent, for one term. A term-hour credit, therefore, is only two-thirds the value of a semester-hour credit. Correction on this basis has been made in the tables of comparison.

Some exceptions should be noted to the practice of awarding credit on the term-hour and semester-hour basis. In Georgia State College the unit of credit is the year hour, or one hour of class work per week or its equivalent for one session. In the Agricultural College of Utah, although the session is divided into three terms, the unit of credit is the semester hour. In Massachusetts Agricultural College the year's work is divided into four terms, the fourth comes in the summer and therefore does not affect the awarding of credit on the basis of term hours. Similarly, in the New York State College of Agriculture the year is divided into three terms; the third comes in the summer and therefore does not affect the awarding of credit on the basis of semester hours.

Although generally spoken of as an "hour," the recitation period in most institutions is of 50 minutes durations. There are four exceptions to this rule. Alabama Polytechnic Institute and the

Montana College of Agriculture maintain 60-minute recitation periods, and Rutgers College and the Ohio State University maintain 55-minute periods. To make correction for this variation no adjustment has been made. These differences, however, should be kept in mind when making comparisons.

The most significant variation in the credit value of college work is found in the different amounts of laboratory or field work required as equivalent to classroom work. In general one credit hour implies three actual hours of effort on the part of the student. Some institutions conscientiously insist upon this rule. In order to make allowance for the peculiarities of the various courses they require varying amounts of time in attendance at class or in laboratory. In courses like drawing or shopwork, for example, requiring no outside preparation, they demand three actual hours' attendance for each credit. For other courses, like physics, requiring only a small amount of outside preparation, they demand two hours of attendance at class; and for courses like English literature, requiring much outside preparation, they require only one hour in attendance at class.

Apparently, many institutions for the sake of convenience are anxious to maintain a plan for awarding credit that will permit of uniform credit for each kind of class work, whether recitation or practicum, rather than one that will permit of uniformity for each subject. In either case there are bound to be differences in credit value, for more depends upon the exacting requirements of the individual instructor than upon any arbitrary standard based upon class attendance.

Table 8 shows that 20 of the institutions uniformly require two hours of laboratory work for each credit hour. Two institutions uniformly require two and one-half hours as the laboratory equivalent; 10 uniformly require three hours; and 15 require varying amounts ranging from two to three hours. In three institutions there is no differentiation of credit between recitation hours and laboratory hours. The institutions requiring less than three hours may or may not require some outside time in preparation for laboratory work. In many of the institutions requiring varying laboratory equivalents two hours is the normal requirement and excess time required only in certain courses like shopwork and military drill. As a basis of comparison, therefore, the two-hour laboratory equivalent has been adopted in this discussion. At best it is a mere arbitrary standard and does not warrant absolute dependence, but undoubtedly it is more dependable than the use of college credits without adjustment. (See appendix.)

The value of the unit of credit for collegiate work may be much affected by the number of hours per week that students are permitted to carry. From Table 8 it may be seen that many colleges limit the

amount of work for which students may register. In many of the colleges that do not indicate a fixed amount the limits are automatically fixed by the term schedules, which vary from term to term. It should be understood that the items listed in the table represent the maximum and minimum amounts of work that students may carry without special permission. These limits generally may be exceeded under unusual conditions.

Of the colleges that maintain fixed limits the minimum number of hours per week for which students may register varies from 10, as with the University of Nevada, to 20, as with the Mississippi College. The median number is 15 hours, and in six colleges this is the minimum limit. In eight of the colleges the minimum limit is 12 hours. The maximum limit ranges from 15 hours, as in the Agricultural College of Utah, to 24 hours, as in the Agricultural College of Texas. In nine colleges 18 hours per week is the maximum limit; in five 20 hours is the maximum; and in four 21 hours is the maximum.

In general the heavier the schedule that students are required or allowed to carry the lower the value of the unit of credit. It is, of course, impossible to make correction for this variation, but the difference noted here should be kept in mind when comparing the requirements of the several colleges.

In comparing requirements for graduation in a curriculum like that of agriculture, which affords opportunity for specialization in many phases of the subject, it is quite necessary to restrict attention to one special line or major option. For the present discussion the agronomy or field crops option has been selected. In the few cases where no such option is offered, as in the colleges of Hawaii, Nevada, New Hampshire, Porto Rico, Rhode Island, Vermont, and Virginia, some other option has been selected. These colleges, in comparison with others, therefore, are likely to show a lower proportion of required work in agronomy and a higher proportion in some other special subjects. In some institutuons a liberal elective system takes the place of the major option plan, and in each of these an approved combination of courses suitable for students specializing in agronomy has been used.

DISTRIBUTION OF WORK REQUIRED FOR GRADUATION.

Table 9, appearing in six parts, shows in detail the requirements for graduation in the four-year curriculum in agriculture for the several agricultural colleges. The requirements are recorded in corrected semester hours and are grouped according to subject and listed according to the year in which the work is required. Part I of the table shows the distribution of the work in nontechnical subjects; Parts II, III, and IV pertain to technical subjects; Part V is devoted to military and physical training and to certain science sub-

jects; and Part VI completes the tabulations pertaining to science, includes the work required as elective, and summarizes the requirements in all subjects. The subject classification employed here is similar to that employed in agricultural college circles. In a few instances certain unusual subjects have been classed with other distinct subjects, but in all such cases an effort has been made to indicate the fact by means of footnotes.

A few of the colleges maintain a liberal elective system, and in these the work required in the various subjects may vary somewhat according to the individual selection. Since most of these institutions require selections from certain groups or classes of subjects, the scope of the probable variation is limited. It should be remembered also that the present comparison is based upon a single subject of specialization, agronomy; and even in the colleges with the most liberal elective systems, the schedules of students specializing in a common subject, like the one chosen for this study, are remarkably uniform. The schedules from which these tabulations and comparisons are made have been prepared to satisfy all special requirements and have been approved by the several institutions as representing the prevailing practice. Figures indicating credit for courses that have been included to meet special requirements, and those for which substitutions may be made, are shown in italics. Some institutions, however, may make a practice of granting special permission for limited substitution, but such modifications of the prescribed schedules should have little effect upon the general distribution of the requirements as shown here. (See appendix, p. 97.)

To facilitate comparison of the requirements for graduation, the data contained in Table 9 have been summarized in Tables 10 and 11.

Yearly distribution.—The distribution of the requirements for graduation from the standpoint of the college year in which the work is required is summarized in Table 11. The table shows the number of colleges requiring work in each subject group in each of the four years and for all four years combined. It also shows, in semester hours, the range of the requirements and the median requirement for each group of subjects required each year and for all years combined. The institutions requiring no work in any particular subject in any given year were not considered in making up the median requirements in each case. The median number, therefore, represents the median practice of only the institutions requiring work in the subject in question.

As may be seen from the lower part of the last column of Table 11, the total requirement for graduation ranges from 124 to 228 hours, and the median requirement is 157 hours. The requirement for the freshman year ranges from 34 to 57 hours, and the median requirement is 41½ hours. For the sophomore year the range is very similar.

For the junior and senior years the maximum requirement is the same, as for the freshman and sophomore years and the minimum requirement is 27 and 28⅔ hours, respectively. The median requirement for each of these years is 38 and 37 hours, respectively. For the whole four years the distribution of the work from the subject standpoint is shown across the bottom of the table, and the proportionate distribution is shown graphically by figure 2.

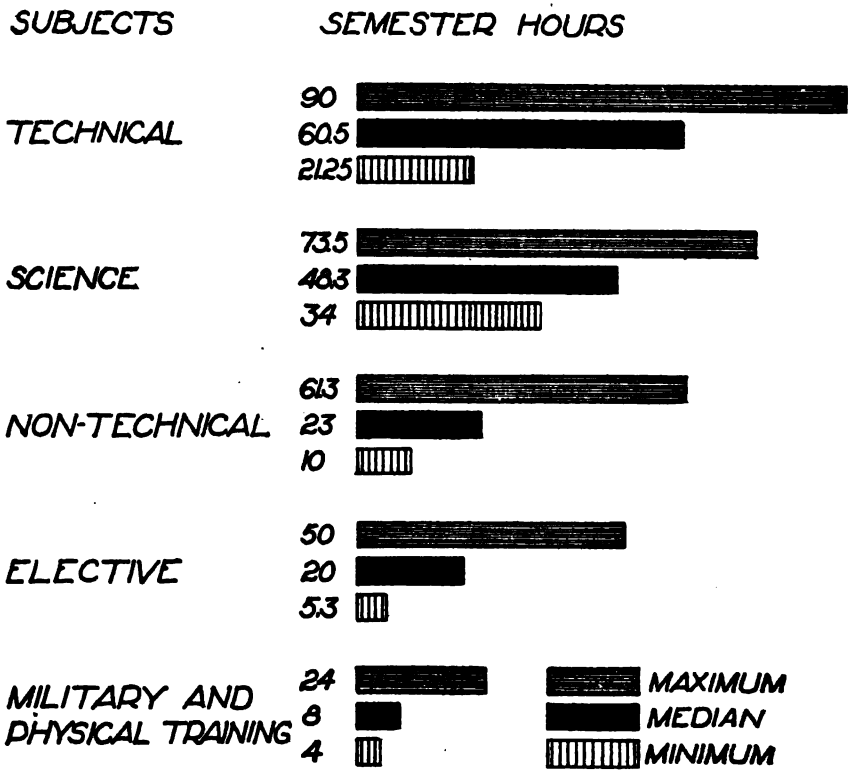

FIG. 2—Distribution and range of the requirements for graduation in agriculture.

Subject distribution.—Since the amount of work required for graduation depends more upon the institution's standard of proficiency than upon the number of hours required in attendance at class, the figures representing total requirements have limited significance. For example, students who have completed the 228 semester hours required by the Virginia Polytechnic Institute may not be any better equipped than those who have graduated from the University of Missouri, with its minimum requirement of 124 semester hours. The value of an analysis of this kind, therefore, is not found in a comparison of total requirements so much as in a comparison of the proportional requirements in the various subjects included in the curriculum.

A summary distribution of the requirements among the various subject groups is shown on a percentage basis in Table 10. The percentage in each case is based upon the total requirement of the institution concerned, as shown in the second column. The subjects are grouped primarily under five heads, and the proportion of work required in each of these main subject groups is shown in the columns of italicised figures. The primary groups are divided into two or more subdivisions, and the sum of the items shown under the several subdivisions should equal the number given as the proportion for the main subject groups. Likewise, the sum of the percentages shown in italics should equal 100. The proportionate requirements in comparison with the average requirement is represented graphically in figure 4. The vertical line in each figure serves to indicate the position of each college in relation to the average requirement.

The mean numbers, as shown at the bottom of Table 10, may be regarded as the average proportions. Collectively, therefore, they represent the average distribution of the work required for graduation in agriculture. These averages in each case have been derived by considering all colleges, even though many of them may not require any work in certain subjects. The results are somewhat different when only such colleges as require work in the subject concerned are included in the calculation. The subjects most seriously affected in this respect are foreign language, mathematics, and social science. The average requirements in each case, including only the institutions requiring the subject, are 6.7, 3.7, and 5.2 per cent, respectively. Figure 3 is intended to represent the average distribution of the requirements for graduation.

Requirements in all subjects.—The total requirements for graduation for the several institutions is shown in Table 10. In the first column of figures is shown the requirement of each college, according to the institution's method of awarding credit. The figures range from 79, as required by Georgia State College, to 468, as required by Virginia Polytechnic Institute. The varying number of terms in each college year, and the varying practice with regard to the laboratory work equivalents, are the chief causes for the conspicuous variation in credit requirements. It is apparent, therefore, that the requirements for graduation, as expressed in terms of college credit, are not comparable.

In the second column of the table is shown, in semester hours, the total requirement for graduation, after correction has been made for varying methods for awarding credit. For convenience, the assumption that two hours of laboratory work are equivalent to one hour of lecture or recitation work has been followed. The totals vary from 124 semester hours, as required by the University of Missouri, to 228 semester hours, as required by Virginia Polytechnic Institute. The

mean total requirement, as shown at the bottom of the table, is approximately 165 semester hours. The median total requirement, as shown in Table 11, is 157 semester hours. Compared with the mean total requirement, this represents more nearly the consensus of opinion among the colleges concerning what constitutes a suitable total. It should be observed, however, that the value of the credit units employed here is lower than that of many institutions, and for this reason neither of these figures should be regarded as an appro-

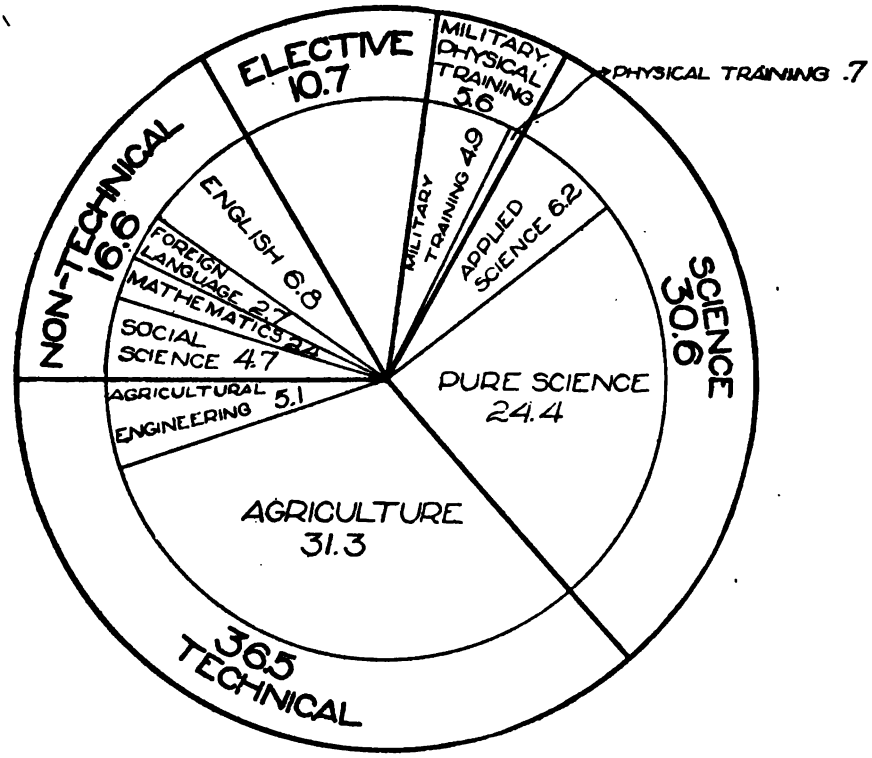

FIG. 3—Percentage distribution of the requirements for graduation in agriculture based upon the average requirement in each of the groups of subjects.

priate total requirement. The median figure, nevertheless, serves as a basis of comparison for any college of agriculture whose standard of accrediting is similar to that employed here.

The requirements in the various groups of subjects are discussed separately on the following pages.

REQUIREMENTS IN NONTECHNICAL SUBJECTS.

Under this head are included the requirements in such subjects as English, foreign language, mathematics, history, civil government, economics, rural economics, marketing, sociology, rural sociology, library practice, journalism, psychology, and education.

All of the colleges require some work in nontechnical subjects. The amount ranges from 10 to 61½ hours, with a median requirement of 23 hours. This wide variation is not due to differences in entrance requirements, as might be expected, for the institutions requiring the most work in nontechnical subjects are not those admitting students with less than 15 entrance units. It is true, however, that the institutions with low entrance requirements require relatively high proportions of work in nontechnical subjects. In the freshman year the median requirement is 12 hours, and in each of the other years it is six hours. As shown in Table 10, the proportion of work required by the several colleges in all subjects classed as nontechnical ranges from 6.1 per cent, as required by University of Idaho, to 34.2 per cent, as required by Massachusetts Agricultural College. The average proportion is 16.6 per cent. (See fig. 3.) The colleges more nearly approaching the average are those of California, Florida, Minnesota, Texas, and Wisconsin. The relative proportions of work in nontechnical subjects for the several colleges is represented graphically in figure 4.

English.—Under English are included courses in grammar, composition, rhetoric, literature, library practice, argumentation, public speaking, and journalism. As shown in Table 9, Part I, all of the colleges require one or more courses in this group of subjects. All but one, Iowa State College, require work of this nature in the freshman year; 29 require it in the sophomore year; 16 in the junior year; and 6 in the senior year. The total amount of work required in this subject ranges from 4 to 24 hours, and the median requirement is 10 hours. The proportions of required work in English range from 2.6 per cent, as required by the Ohio State University, to 13.3 per cent, as required by Clemson Agricultural College; and the average proportion, as shown at the bottom of Table 10, is 6.8 per cent. The colleges more nearly approaching the average are those of Connecticut, Delaware, Illinois, Kentucky, Maine, Oklahoma, Pennsylvania, and Washington.

Twenty-eight of the colleges require independent courses in English literature. A few require general courses in English, which include literature. Seventeen colleges require either argumentation or public speaking. These subjects, generally, are required in the freshman or sophomore years, although five colleges require them in either the junior or the senior year. At least five colleges, those of Florida, Iowa, Kansas, Oklahoma, and Rhode Island, require some work in either news writing or journalism.

Foreign language.—Twenty of the colleges include work in foreign language as a requirement for graduation. In the Agricultural College of Utah, English may be taken in place of foreign language, and in North Carolina College and Rhode Island State College military

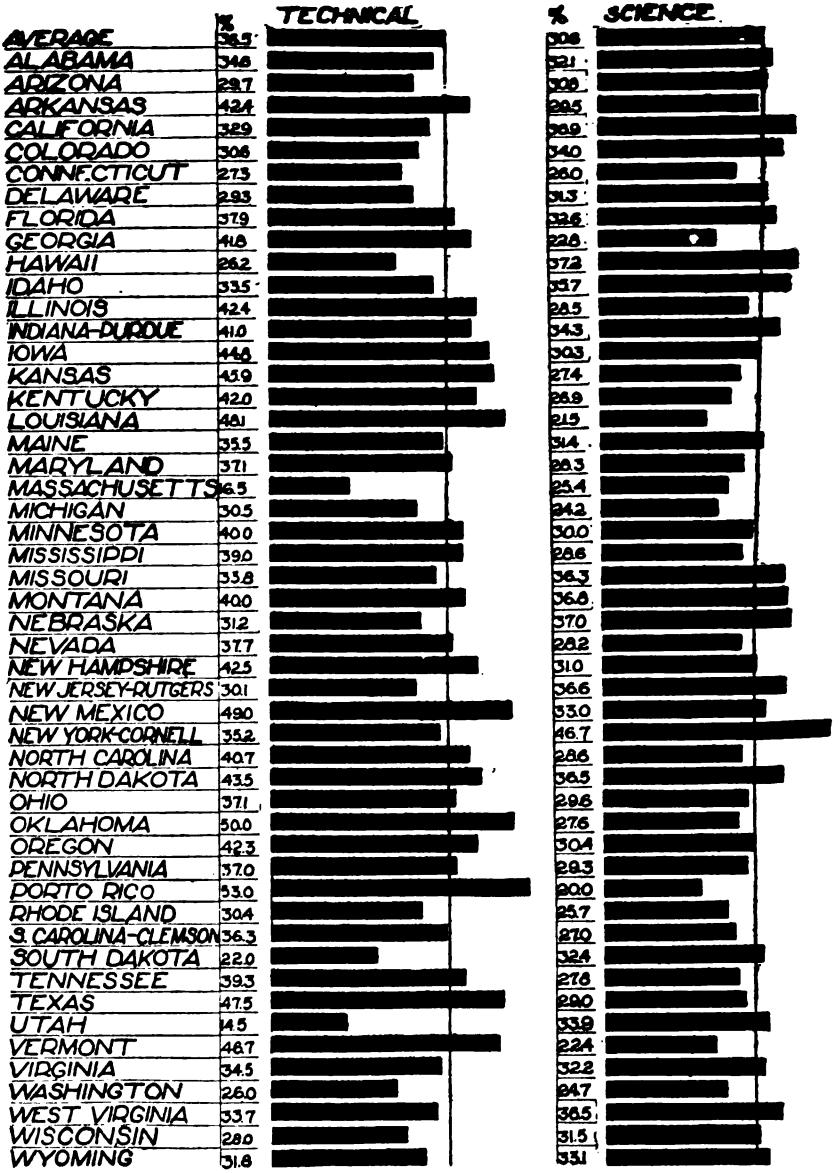

FIG. 4—The variation among the colleges in the distribution of the required work for graduation in agriculture compared with the average distribution.

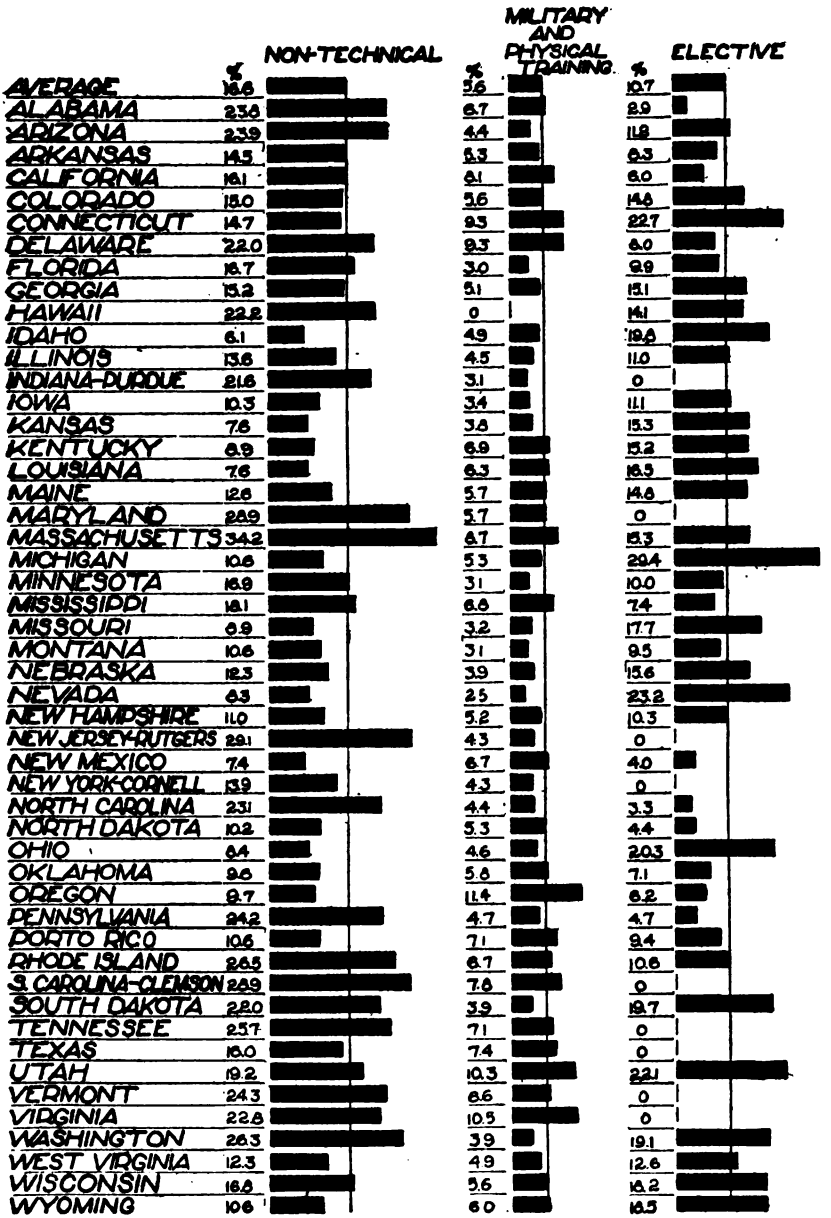

FIG. 4—Continued.

science may be substituted. In five colleges the work is required in a single year, while in the remaining 15 colleges it may be taken in two or more years. Fourteen of the colleges require at least a part of the foreign language work during the freshman year, 12 during the sophomore year, 5 during the junior year, and 4 during the senior year. The total amount of work required in foreign language ranges from 4 to 20 hours, and the median requirement among the colleges prescribing the subject is 12 hours. The proportion of the work required in foreign language ranges from 2.2 per cent, as required by North Carolina College, to 13 per cent, as required by the State College of Washington, and the average proportion is 6.6 per cent. The colleges more nearly approaching the average are those of Arizona, Indiana, Maryland, Pennsylvania, Rhode Island, and Wisconsin. By including in the calculation the colleges that require no foreign language, the average proportion is 2.7 per cent, but in this case the average based upon only those institutions requiring the subject is a better guide as to the most appropriate proportion. It is of interest to note, however, that a majority of the colleges do not require foreign language, and, as previously noted, 23 of them do not require it for either entrance or graduation.

Mathematics.—Thirty-two of the colleges require work in mathematics for graduation. This is preeminently a freshman subject, only six of the colleges requiring it in any other year, and these require it in the sophomore year. The amount of work required in this subject ranges from 1⅓ to 13⅓ hours and the median requirement is 5 hours. Considering only the colleges requiring the subject, the proportion of work required in mathematics ranges from 1.5 per cent, as required by Maryland State College, to 7.4 per cent, as required by Clemson College; and the average proportion is 3.7 per cent. By including the institutions requiring no mathematics, the average proportion is reduced to 2.4 per cent, and the colleges more nearly approaching the average are those of Arkansas, Delaware, Michigan, New Hampshire, and Rhode Island.

Social science.—Under this head are included all courses in such subjects as history, civil government, economics, rural economics, sociology, and education (including psychology). Forty-five of the colleges list, as a part of their requirements for graduation, at least one course in this group of subjects. Only 12 colleges require this kind of work in the freshman year, and only 5 in the sophomore year. During these years the work comprises mostly history and in a few cases civil government. Industrial history is a common subject. Some form of social science is required in the junior year by 28 colleges and in the senior year by 32 colleges. The median requirement for these two years is five and six hours, respectively. The work consists largely of general economics, rural economics, industrial

history, and marketing. In a few institutions work is required in psychology and education.

The total amount of work required in social science subjects ranges from 3 to 22⅔ hours, with a median requirement of 8 hours. Considering only the colleges requiring some work in this group of subjects, the proportion ranges from 1.7 per cent, as required by Virginia Polytechnic Institute, to 10.7 per cent, as required by Maryland State College, and the average proportion is 5.2 per cent. By including all of the colleges the average proportion is slightly lower, 4.7 per cent. The colleges more nearly approaching this average are those of Delaware, Nevada, New Hampshire, Rhode Island, South Dakota, and Tennessee.

REQUIREMENTS IN TECHNICAL SUBJECTS.

Under the head of technical subjects are included strictly agricultural subjects, agricultural engineering, farm mechanics, forestry, landscape gardening, and veterinary science. Farm management, including farm accounts, on account of its being given generally in one of the technical departments and because of its intimate relationship with technical agriculture, is classed as agriculture rather than as economics. Regular courses in rural economics are not classed under this head. Courses in genetics, including those in animal breeding and plant breeding, which are given often in conjunction with technical courses, are classed as technical.

Table 11 shows that the total requirements in technical subjects range from 21 to 90 hours, with a median of 60½ hours. (See fig. 2.) With three exceptions in the freshman year, all colleges require work in technical subjects in all years. In the colleges of California, New York, and Utah, a liberal elective system prevails and the taking of technical courses may be deferred until the sophomore year. In practice some of the elective technical courses are likely to be carried during the freshman year.

There is much variation with regard to the amount of technical work required each year. In the freshman year the amount ranges from 2 to 24 hours, and the median requirement is 10 hours. In the sophomore year the requirements range from 3 to 29 hours, with a median of 12 hours. In the junior year the requirements range from 2 to 30 hours, with a median of 15 hours. In the senior year the requirements range from 2½ to 34 hours, with a median of 18 hours. It may be seen that there is a uniform increase in the median requirement from the freshman year to the senior year.

Of the total requirements for graduation, as shown in Table 10, the proportion in technical subjects ranges from 14.5 per cent to 53 per cent. The colleges requiring the lower proportions, according to the present method of analysis, are those of Connecticut, Hawaii, Massachusetts, South Dakota, Washington, and Wisconsin, all of

which require less than 30 per cent. These colleges all show a high proportion of elective work, a large part of which, it may be assumed, is likely to be taken in technical subjects. The colleges requiring the higher proportions are those of Kansas, Louisiana, New Mexico, Oklahoma, Porto Rico, Texas, and Vermont, all of which require 45 per cent or over. With one exception, Louisiana, these colleges show a relatively low proportion of elective work, and this, to some extent, accounts for the relatively high showing in technical work. The average proportional requirement in technical subjects is 36.5 per cent, as represented graphically in figure 3. The colleges more nearly approaching the average requirement are those of Alabama, Florida, Maine, Maryland, Mississippi, Nevada, New York, Ohio, Pennsylvania, South Carolina and Virginia. The relative proportion of work in technical subjects for the several colleges is shown graphically in figure 4.

In Tables 10 and 11 the requirements in technical subjects are divided into two groups—agriculture and agricultural engineering. The requirements in the latter group are discussed in regular order, (See p. 48.) The requirements in strictly agricultural subjects range from 21 to 78 hours, with a median of 51 hours. Of the total requirements for graduation, the proportions required in this kind of work range from 14.5 per cent to 46 per cent. The average proportion is 31.3 per cent, and the colleges more nearly approaching the average are those of California, Idaho, Maryland, Minnesota, New York, and West Virginia.

Agronomy and soils.—As shown in Table 9, Part II, the required courses in this group are classed under five heads: (1) Field and forage crops, including judging and testing grain; (2) soils, including soil physics, classification of soils, soil surveying, etc.; (3) soil fertility and management, including fertilizers; (4) farm management, including farm accounts; (5) general or unclassified agronomy, including thesis and seminar requirements. Since this is the major subject selected as a basis for comparing requirements for graduation many courses that are included have been selected to meet the requirements for specialization. In at least 13 of the colleges one or more courses included here may be replaced by other courses, within certain restricted limits. In general, students specializing in agronomy will complete all of the courses offered by that department, and therefore the possibilities for election are limited largely to the selection of the time for taking the work.

In the following discussions, therefore, the comments concerning the year in which the work is required are applicable in general, but are subject to exceptions.

In the colleges, of Hawaii, Nevada, New Hampshire, Porto Rico, Rhode Island, Vermont, and Virginia no opportunity for speciali-

zation in agronomy or field crops is offered. In these cases students are required to select an option either of a more general nature, such as general agriculture, or one of a special nature conforming to the demands of the region in which the institution is located. When comparing the requirements in agronomy, therefore, the institutions mentioned above are likely to show a lower proportion of time devoted to this subject and a higher proportion devoted to other technical subjects.

The amount of work required in this group of subjects ranges from 9 to 42 hours, and the median requirement is 25⅓ hours. By eliminating the colleges that offer no opportunity to specialize in this field, as noted above, the minimum requirement is 17 hours, and the median requirement is 27 hours. One-half of the colleges require during the freshman year one or more courses in this group of subjects; 39 require some of the work during the sophomore year; 46 during the junior year, and 48 during the senior year.

Forty-six of the colleges require courses in general *soil work*, and the amount required ranges as high as 13 hours. Only one college requires the work in the freshman year; 24 require it in the sophomore year; 26 in the junior year; and 12 in the senior year.

Thirty-seven colleges require courses classed as *soil fertility and management*. Among these the amount of work required ranges as high as 16 hours, but the median requirement is only 4½ hours. None of the colleges require the work during the freshman year; 10 require it during the sophomore year; 21 during the junior year; and 19 during the senior year.

Courses in *farm management and farm accounts* are required by 43 colleges. Among these the amount of work required ranges as high as 11 hours, and the median requirement is 5½ hours. This is predominantly an upper-class subject, 11 requiring the work in the junior year and 36 in the senior year. The requirements listed by seven colleges for the freshman and sophomore years are generally either survey courses in farm management or courses in farm accounts.

Twenty-three colleges require work classed here as *general agronomy*, which includes the thesis and seminar requirements. In a few cases, only, the work comprises a combination crops and soils course. The amount of work required under this head ranges as high as 10½ hours, and among those requiring such work the median requirement is 4 hours.

Horticulture.—The requirements under this head are grouped into five divisions as follows: (1) Plant propagation, including nursery practice; (2) pomology, or fruit growing; (3) olericulture, or vegetable growing; (4) landscape or ornamental gardening, including in a few instances floriculture; (5) general horticulture.

Nineteen colleges require work in *plant propagation*. Among these the amount ranges as high as 4½ hours, and the median requirement is 3 hours. This is generally given as a freshman subject, nine colleges requiring it in that year. Seven colleges, however, require it in the sophomore year, and three in the junior year.

Pomology is required by 25 of the colleges. Among these the amount ranges as high as 7½ hours, and the median requirement is 3 hours. The work is more generally required in either the sophomore or junior years.

Twenty colleges require *olericulture*, and among these the amount required ranges as high as 6½ hours, but the median requirement is 3 hours.

Landscape or ornamental gardening is required by seven colleges, and among these the median requirement is but 2 hours.

Eighteen colleges require courses classed as *general horticulture*. The amount required ranges as high as 20 hours, but this is the requirement in one of the colleges that do not offer an opportunity for specialization in agronomy, and this amount represents the requirement for the curriculum in general agriculture. By eliminating this institution the maximum requirement is 6 hours and the median requirement is 3 hours. These courses are more generally required in the sophomore year.

Agricultural engineering.—Under this head are included all courses in drawing, shop work or farm mechanics, surveying, irrigation, drainage, farm structures, farm machinery, and other mechanical equipment. As shown in Table 11, 45 of the colleges require one or more courses from this group of subjects. Among these colleges the amount of work required ranges from 3 to 21 hours, and the median requirement is 9 hours. Thirty-two of the colleges require some of such work in the freshman year, 18 require some in the sophomore year, 22 require some in the junior year, and 19 require some in the senior year.

Table 10 shows that of the total requirement for graduation the proportion of work required in agricultural engineering ranges as high as 13.1 per cent, as required by Colorado Agricultural College, and that the average requirement is 5.1 per cent. The colleges more nearly approaching the average are those of Florida, Georgia, Illinois, Louisiana, New York, and North Carolina.

In Table 9, Part III, the courses in agricultural engineering are classified as follows: (1) Farm mechanics (shopwork); (2) farm machinery, including farm motors and engines; (3) rural architecture; (4) irrigation and drainage; (5) surveying and platting; (6) drawing; (7) general (or unclassified) agricultural engineering.

Twenty-three colleges require courses in *farm mechanics or shopwork*. Among these the amount of work required ranges from 1½ to

6 hours, and the median requirement is 3½ hours. Only seven of the institutions require the work in other than the freshman year.

Farm machinery courses are required by 29 colleges, and among these the amount of work required ranges as high as 7 hours, but the median requirement is 3 hours. Five require the work in the freshman year, 8 in the sophomore year, 12 in the junior year, and 8 in the senior year.

Only seven colleges require a separate course in *rural architecture*. Among these the amount of work required ranges from 1 to 4½ hours.

Courses in *irrigation and drainage* are required by 15 colleges. Among these the amount of work required ranges from 1½ to 5½ hours, and the median requirement is 3 hours. Except for two colleges that require the work in the sophomore year, the work is required only of upper classmen.

Twenty-one colleges require a separate course in *surveying*. Among these the requirements range from 1 to 5 hours, and the median requirement is 3 hours. This is predominantly a sophomore subject, although five require it in the freshman year, four in the junior year, and one in the senior year.

For the reason that mechanical and freehand drawing are frequently required in a single course, the subjects are combined in the table. Although separate courses in freehand drawing are sometimes required, the number of such cases does not justify the making of a distinct division. Seventeen colleges require work classed as *drawing* and among these the requirements range from 1 to 5 hours, with a median of 3 hours. Except for three cases, this subject is required in the freshman year.

Ten colleges require courses in either *general agricultural engineering* or in two or more subjects in the classification adopted here. The requirements range as high as 7 hours, and the median requirement is a little over 3½ hours. Seven of the ten colleges require this work in either the junior or senior year.

Genetics.—Under this head are included all distinct courses in animal or plant breeding and in general genetics. Forty-two of the colleges require some work in this group of subjects. Among these the requirements range from 2 to 9 hours, and the median requirement is 4 hours. Eight colleges require distinct courses in *animal breeding*, ranging in amount of work from 1½ to 6 hours. For students specializing in animal husbandry, the proportion of colleges requiring such work is, of course, much higher. Many other colleges require some work in animal breeding, but it appears under other classifications, especially under the head of types and breeds of live stock. Distinct courses in this subject are generally required in either the junior or senior year.

Thirty-one colleges require distinct courses in *plant breeding*. Among these the amount ranges from 1⅓ to 8 hours, and the median requirement is 3 hours. This work is uniformly regarded as an upper-class subject.

Seventeen colleges require at least one course in *general genetics*. Among these the requirements range as high as 6 hours, and the median requirement is 3 hours. This also is regarded generally as an upper-class subject.

Animal husbandry.—In Table 9, Part IV, the courses in this subject are classified as follows: (1) Breeds and types of live stock, (2) feeding and management of live stock, (3) dairy husbandry and dairy industries, (4) poultry husbandry, (5) veterinary science and practice, (6) general (or unclassified) animal husbandry. All colleges but one require at least one course under this classification. The one exception, University of California, specifies that a definite proportion of the elective work must be in agricultural subjects, and undoubtedly all students specializing in agronomy are advised to carry at least one course in animal husbandry.

The total amount of work required in these subjects ranges from 3 to 34 hours, and the median requirement is 14 hours. The work generally is required during the first two years, but many courses, like feeding and management, are required by upper-class men.

Forty-six of the colleges require work in courses classed under *breeds and types of live stock*. Among these the amount ranges from 2½ to 9 hours, and the median requirement is 4⅔ hours. At least one course in the subject is required in the freshman year by 32 colleges, in the sophomore year by 18 colleges, in the junior year by 11 colleges, and in the senior year by 3 colleges.

In *feeding and management of live stock*, 31 colleges require at least one course. Among these the amount of work required ranges from 2 to 9 hours, and the median requirement is 3 hours. The course is required more generally by juniors, 19 colleges so requiring it, but 2 colleges require it in the freshman year, 8 in the sophomore year, and 9 in the senior year.

Dairy husbandry is required by 36 colleges, and among these the amount of work required ranges from 2 to 8 hours, with a median requirement of a little over 3 hours. In 12 colleges the work is required in the freshman year; in 16 it is required in the sophomore year; in 10 the junior year; and in 5 the senior year.

Poultry husbandry is required by 19 colleges. Among these the amount of work required ranges from 1 to 6 hours, and the median requirement is 2½ hours. This subject is required more generally in the sophomore and junior years.

Courses relating to *veterinary practice* are required by 19 colleges. The requirements range from 2 to 9 hours, with a median of 5 hours.

This work also is required more generally during the sophomore and junior years, although 5 colleges require it in the senior year.

In 5 colleges general or unclassified courses in animal husbandry are required. The requirements range from 2 to 6 hours.

Forestry.—In seven colleges two-hour or three-hour courses in forestry are required. Two colleges require it in the freshman year, two in the sophomore year, and three in the senior year.

General agriculture.—In a few colleges general courses in agriculture are required. In others students are required to attend agricultural seminars or to engage in practical farm operations, for which credit is given. In still others certain courses, like "agricultural investigations" and "methods of research in agriculture," are required. In two other colleges a definite amount of work must be selected from among a group of agricultural courses. In such cases and in those mentioned above the requirements have been grouped together under general agriculture. In 16 colleges such work is required, and the amount ranges from 1 to 17 hours.

REQUIREMENTS IN SCIENCE SUBJECTS.

Under the head of science are included all requirements in the strictly science courses, as well as those intimately related to agriculture, such as agricultural chemistry, agricultural botany, soil bacteriology, economic entomology, and plant diseases.

The amount of work required in all science subjects, as shown in Table 11, ranges from 34 to 73½ hours, with a median requirement of 48⅓ hours. (See fig. 2.) All of the colleges require science in the freshman and sophomore years; 45 require it in the junior year; and 33 require it in the senior year. There is much variation in the amount of science required each year. In the freshman year the requirements range from 2⅔ to 24½ hours, while the median requirement is 15½ hours. In the sophomore year the range is from 9 to 32 hours, and the median is 18 hours. In the junior year the range is from 3 to 24 hours, and the median is 12 hours. In the senior year the range is from 3 to 20 hours, and the median is 6 hours.

In some colleges the schedule seems to be overloaded with science in one year, and quite deficient in another year. One institution, calling for but 3 hours during the freshman year, calls for 28 hours in the sophomore year. The curriculum in several institutions calls for three or four heavy science courses during the same year. One curriculum, for example, calls for 10 hours in chemistry, 8 hours in botany, and 6 hours in bacteriology in the freshman year. Another calls for 8 hours in botany, 5 hours in zoology, 13 hours in chemistry, and 6 hours in physics during the sophomore year. In this same institution the science requirements for the four years are 8 hours, 32 hours, 17 hours, and 5 hours, respectively.

As shown in Table 10, the proportion of work required in science subjects by the several colleges ranges from 21.5 per cent, as required by Louisiana State University, to 46.7 per cent, as required by Cornell University. The average proportion, which is represented graphically in figure 3, is 30.6 per cent. The colleges which more nearly approach this average are those of Arizona, Arkansas, Delaware, Iowa, Maine, Minnesota, New Hampshire, Ohio, Oregon, Pennsylvania, and Wisconsin. The relative proportion of work required in science by the several colleges is represented graphically in figure 4.

"Applied" science.—In order to show the proportion of the science requirements which is in subjects closely related to agriculture, such as agricultural chemistry, agricultural botany, agricultural bacteriology, economic entomology, and the like, an arbitrary division of the work has been made in Table 10. The courses in such subjects have been classed as "applied" science and the remaining science courses as "pure" science. There is no well-marked distinction between these two divisions, for much depends upon the teaching methods employed. Furthermore, courses with like content frequently are given different names. A course in plant diseases and their control in one college, for example, may be very similar to a course in plant pathology in another college. For this reason plant pathology is regarded here as agricultural botany and classed as "applied" science. Plant physiology, on the other hand, as it is taught in many colleges, may be as closely related to agriculture as plant pathology, yet it has been classed under pure science. Despite these apparent inconsistencies, the result of such a classification is suggestive. All but three of the colleges require at least one course in applied science. The proportions run as high as 19.3 per cent, as required by Oregon State Agricultural College, and the average proportion is 6.2 per cent. Other colleges requiring high proportions of science courses closely related to agriculture are those of California, Montana, Nebraska, New York, and Wisconsin. Twenty-one of the colleges require at least the average proportion.

Biology.—Under this head are included all required courses in the various phases of botany, including bacteriology, and in zoology and entomology. As shown in Table 9, Part VI, all colleges require some work in this group of subjects. The amount of work required ranges from 8 to 36½ hours, and the median requirement is 23½ hours.

The work in botany is somewhat loosely classified into three divisions—general botany, agricultural and economic botany, and bacteriology. The former includes all phases of the subject except those indicated by the two latter divisions. Forty-seven colleges require some work in *general botany*, and the remaining three require work classed as agricultural or economic botany, which undoubtedly

includes several phases of the subject. The amount of work required in general botany ranges as high as 24 hours, and the median requirement in the subject is 9 hours. This is regarded generally as a freshman or sophomore subject, but courses in physiology and histology are required frequently in the junior and senior years. Thirty-three colleges require botany courses in the freshman year, 21 in the sophomore year, 17 in the junior year, and 5 in the senior year.

In 32 of the colleges part of the requirements in biology is listed as *agricultural or economic botany*. On account of the common practice of including under plant pathology the required work in the control of plant diseases, the required courses in this subject have been grouped under agricultural botany. The required work under this head ranges as high as 11½ hours, with a median requirement of 3¾ hours. Four colleges require at least part of such requirement in the freshman year, 7 in the sophomore year, 15 in the junior year, and 14 in the senior year.

Forty-two of the colleges require either general or special work in *bacteriology*. The amount ranges as high as 10½ hours, and the median requirement, among those requiring the subject, is 5 hours. This is regarded generally as an upper-class subject. One college requires it in the freshman year, 12 in the sophomore year, 20 in the junior year, and 15 in the senior year.

Forty-one colleges prescribe at least one course in *zoology*. The amount ranges as high as 10 hours, and among those requiring the subject the median requirement is 4½ hours. This subject usually is required in either the freshman or sophomore year. Ten colleges require it in the freshman year, 26 in the sophomore year, and 6 in the junior year.

Thirty-eight of the colleges require one or more courses in *entomology*. The amount ranges as high as 10 hours, and among those requiring the subject the median requirement of 4 hours. The work is more commonly required in either the sophomore or junior year. Two of the colleges require at least part of the work in the freshman year, 13 in the sophomore year, 19 in the junior year, and 11 in the senior year.

Chemistry.—This subject is required in varying amounts by all of the colleges. The requirement ranges from 8 hours to 32 hours, with a median of 18 hours. The required work in chemistry, as shown in Table 9, Part VI, is classed under five heads, as follows: General or inorganic, qualitative, quantitative, organic, and agricultural.

All of the colleges require *general or inorganic chemistry*. The amount of work required ranges from 3 to 15 hours, with a median of 8⅔ hours. Forty colleges require the work in the freshman year; 11 require it in the sophomore year; and in 1 it may be taken in either year.

Twenty-seven colleges require *qualitative analysis* as a distinct course, and a few others apparently require it as a part of the general course in chemistry. The amount of work required ranges from 1½ to 10 hours, and the median requirement, among the colleges prescribing the subject, is 4 hours. This is predominately a sophomore sudject, 18 colleges requiring it in this year; 5 in the freshman year, and 4 in the junior year.

Twenty colleges require *quantitative analysis* as a distinct course, and among these the median requirement is 3½ hours. This subject generally is given as a sophomore or junior course. One college requires the work in the freshman year, 8 in the sophomore year, 9 in the junior year, and 2 in the senior year.

Thirty-four colleges require *organic chemistry*, and among these the amount of work required ranges from 1½ to 10 hours, and the median requirement is 3¾ hours. This may be regarded as a sophomore subject. One college requires it in the freshman year, 20 in the sophomore year, 11 in the junior year, and 2 in the senior year.

Thirty-two colleges require *agricultural chemistry*, and among these the requirement ranges from 1½ to 11 hours, with a median of 4 hours. This is predominantly a sophomore subject, being required in that year by 17 colleges, but 1 requires it in the freshman year, 13 in the junior year, and 7 in the senior year.

Physics.—Thirty-six colleges require physics for graduation. Of the 14 that do not require physics, 3 require the subject for admission. In 11 colleges, therefore, students may graduate without having had physics in either high school or college. The amount of work required in physics ranges from 3 to 10 hours, and the median requirement is 6 hours. Eleven colleges require the work in the freshman year, 19 in the sophomore year, and 6 in the junior year.

Geology.—Twenty-nine colleges require geology for graduation. Among these the amount of work required ranges from 2 to 7 hours, and the median requirement is 3 hours. This is predominantly a sophomore subject. In 2 colleges the requirement in geology must be satisfied during the freshman year, in 13 colleges during the sophomore year, in 6 colleges during the junior year, and in 5 colleges during the senior year. In 3 institutions the requirement is divided between two years.

REQUIREMENTS IN MILITARY AND PHYSICAL TRAINING.

All courses in military science and tactics and in physical education, including hygiene and human physiology, are grouped under military and physical training. As shown in Table 9, Part V, an attempt has been made to separate military training from physical education. Since many of the colleges require military courses which

include physical education, a study of the combined, rather than the separate, requirements is recommended.

All of the colleges, except that of Hawaii, require work in this group of subjects. The amount required ranges from 4 to 24 hours, and the median requirement is 8 hours. Forty-nine of the colleges require some work in these subjects during both the freshman and sophomore years. Seventeen require some such work during the junior year, and 10 require it during the senior year. In both the freshman and sophomore years the requirements range from 2 to 7 hours, and the median requirements are 4 and 3 hours, respectively. Among those requiring the work during the junior and senior years, the requirements range from 2 to 6 hours, and the median requirement in each year is 3 hours.

On the percentage basis the requirements in military and physical training range from 2.5 per cent, as required by University of Nevada, to 11.4 per cent, as required by Oregon State Agricultural College. The average proportion is 5.6 per cent. (See fig. 4.)

Ten colleges require some work in either personal hygiene or human physiology and 16 require distinct courses in physical education. The requirements in each range from 1 to 4 hours, and the median requirements are 1 and 2 hours, respectively.

REQUIREMENTS IN ELECTIVE WORK.

In most institutions the amount of work required as elective is a definite quantity. In a few colleges, however, a limited number of substitute courses may be taken in place of certain courses in the regular schedule, but such courses are not classed here as elective. In other colleges the elective work is prescribed in such a way as to require a minimum number of hours in technical work, a minimum number in nontechnical, a minimum number in science, and a minimum number as free elective. In cases where the prescription is sufficiently definite, selected courses to meet the requirements have been included in the schedules from which the tables were made and upon which the present discussion is based. In other words, the general and free elective courses only have been classed as elective.

In other cases, where a liberal elective system prevails in place of the major option plan, a selected number of courses have been included to meet the specified requirements for specialization. Such selections have been made, or at least approved, by the colleges concerned. In such cases also the elective work listed in the table usually comprises only a small proportion of the total work shown as elective in the catalogue schedules, or that proportion which may be regarded as free elective. In the Cornell curriculum, for example, the table shows no elective work, while in reality the work of the last two years is wholly elective under the limitations of the advisory

system. The outline in this case includes all required work and a selected number of courses recommended for students specializing in farm crops. In the other institutions in which a liberal elective system takes the place of the major option plan a similar adjustment has been made. In a few other institutions the suggested curriculum in each major option is somewhat elastic, and in these it is possible for students to select a combination of courses which may show proportions somewhat different from those shown in the tables.

Since so much variation occurs with regard to the method for determining the amount of work required as elective, a comparison of the colleges from this standpoint is not justified. The actual and percentage proportions of elective work required by the several colleges are indicated in Tables 9 and 10, so that they may be considered in connection with the study of the distribution of the work of each institution.

In actual practice the elective work shown in the tables would be distributed in varying proportions among the several subject groups. In the Michigan Agricultural College, for example, the proportion of required work in each of the subject groups shown in Table 10 is below the average, but, on account of the high proportion of elective work, it may be regarded as very near the average in each group. In Purdue University, on the other hand, all work is prescribed, and for this reason the proportion of work required in each of the main subject groups is higher than the average. A proportionate distribution of the elective work among the various subject groups is not always justified, for in some institutions students are expected to select a large proportion of their elective work from certain groups of subjects. As a rule students select a large proportion of their elective work from among the technical courses. For this reason many of the colleges have prescribed nearly all of the nontechnical work that they expect students to carry and leave a considerable proportion of the science and technical work to be elected.

The question as to how much freedom should be given students in the matter of schedule making is still one of contention. There are extremists in both directions, but there seems to be a movement toward a middle ground. Some institutions prescribe all the work of the four years, and in these the only choice given the student is the selection of a major option. Others prescribe all of the work of the first two years, and at the beginning of the junior year permit students to select a major option in which a portion of the work is pescribed. Some colleges publish tentative schedules for major options which may be modified to suit the individual needs of students. Still others prescribe certain courses that must be taken some time before graduation and permit the students to select additional courses to meet the total requirement. These additional courses sometimes must be selected from certain groups or from the courses given by certain divisions of the institution. In the institutions where the

liberal elective system takes the place of the major option plan, students may specialize in any department of the college of agriculture. In some of these cases specialization implies a stated number of credit hours in courses offered by the selected department and sometimes a stated number in closely allied courses. Since the practices of the several colleges with regard to the method of prescribing curricula vary so greatly and because of there being no well-marked lines of distinction between them, no attempt has been made to classify the colleges on this basis.

The student advisory system is becoming more common, and in cases where much freedom is allowed students in the selection of courses to meet the minimum requirements this system generally is in force. It is possible that in many institutions too much freedom prevails in this respect. The student advisory work sometimes is in the hands of junior members of the faculty who may have distorted ideas with regard to the relative value of courses and who too often magnify the work of the department in which they happen to be situated. It is possible that under such conditions suggestive outlines for each line of specialization would serve as a guide to the students and advisers alike.

REQUIREMENTS FOR ADMISSION AND GRADUATION COMBINED.

The average distribution of the required work for the bachelor's degree in agriculture, covering the high school and college curricula combined, is shown in Table 12.

The chief advantage of such a tabulation is found in the opportunity offered to each institution for comparing its distribution of required work with the average distribution. Although somewhat deficient as a basis of comparison, the average distribution may be regarded as the main criterion upon which to estimate the efficacy of the various practices. Since considerable variation exists with regard to whether certain subjects should be studied in the high-school period or the college period, the present table furnishes an opportunity also for determining whether any excess or deficiency requirements for either admission or graduation is balanced up in the total eight-year requirement. For example, an institution with a low mathematics requirement for admission may justify its practice if its total eight-year requirement is equal to the average for the eight-year period. In like manner an institution with a low English requirement for the collegiate period may justify its practice if its total eight-year requirement in English approximates the average.

The remarkable variation in the distribution of the prescribed work for the eight-year period suggests that there is a lack of a clear conception of what should constitute the requirements for a bachelor's degree. As examples, the requirement in English ranges from 8 to 19 per cent of the total requirement, in foreign language from 6 to 11

per cent, in mathematics from 3 to 16 per cent, in social science from 1 to 12 per cent, in science from 10 to 26 per cent, and in technical subjects from 7 to 26 per cent. Since the colleges control an average of 71.6 per cent of the work of the eight-year period, as shown in Table 12, it is extremely important that their requirements represent the most appropriate proportions and sequences.

Some of the variations in the prescribed requirements for the eight-year period may be attributed to the differences in aim of the several institutions. Although statements of aims are frequently quite deficient or entirely wanting, the principal aim of the most of the colleges of agriculture presumably is to train men for the occupation of farming. Many of the colleges, however, place the emphasis upon training for rural leadership and are more concerned in turning out agricultural teachers, agricultural investigators, agricultural engineers, agricultural economists, and agricultural sociologists than in developing farm operatives. The curricula of such colleges usually require a higher proportion of science and "cultural" or nontechnical courses and a corresponding lower proportion of technical courses.

Assuming that the prevailing tendency among the colleges is to turn over gradually to the secondary schools the function of training persons for the occupation of farming and to stress more and more the training for rural leadership, the collegiate curriculum in agriculture is bound to undergo certain modifications. Such a change in function undoubtedly will tend to raise the proportion of work required in science and in nontechnical subjects and to lower the proportion required in technical subjects. The proportionate requirements for the eight-year period, however, may remain quite constant, so far as technical subjects are concerned, for certain technical courses will be pushed back to the high-school period, and thus make way for more work in science and in such nontechnical subjects as rural economics and rural sociology.

If such a tendency exists, the average requirements in science and nontechnical work, as indicated in the table, are too low to meet the needs of the colleges which have adopted this modified function. Many colleges, of course, offer curricula or options for the special purpose of preparing students for the several phases of professional agriculture. The contents of such curricula or options show a wide variation in the same institution. In other words, several institutions offer two or more agricultural curricula, each with a specific aim. This practice, eventually must supersede that in which candidates for professional careers, such as teaching, are obliged to select a specialized curriculum in some phase of technical agriculture. The content of a curriculum for the training of agricultural teachers, of agricultural journalists, and of agricultural sociologists must be quite different from that for the training of farm operatives, and differ-

entiation should begin as early as possible to insure the most appropriate sequence of courses.

It is apparent from the foregoing that in determining appropriate requirements for the degree of bachelor of science in agriculture the work of the eight years, or even 10 years, including possibly the work of the seventh and eighth grades and undoubtedly the preparatory and collegiate requirements, should be studied together. In this connection, as suggested under the discussion of the requirements for admission, there should be made available in each State a statement showing what is believed to be appropriate requirements for a degree in each line of specialization offered by the State-supported higher institutions. Such a statement may show several appropriate sequences in each line of specialization. The suggested sequences in any line necessarily would be similar from the standpoint of distribution among the various types of courses. That is, each sequence would embrace a certain proportion of tool subjects, a certain proportion of pure science subjects, a certain proportion of technical subjects, and so on. Working under such a plan, prospective candidates for the bachelor's degree may select early in their school career an approved sequence which, if completed successfully, should entitle them to a degree at the end of eight years or 10 years, as the case may be. Candidates who change from one sequence to another will understand that they can receive credit only for such completed courses as are applicable to the selected sequence, and those who make radical changes should not expect to graduate within the normal period.

Such a plan also suggests the necessity for establishing credit equivalents for work done in the high school and the college, respectively. That is, a course which may be taken either in the high school or the college should carry a stated amount of credit, depending upon the place in the eight-year period that the course was taken. Some institutions have already established such equivalents. In a few colleges equal credit apparently is given for such courses when carried in high school, but the more common practice is to grant college credit in the proportion of one-half or two-thirds for work done in high school. In other words, for each high-school unit, which from the standpoint of time is equal to 10 semester hours, the practice is to grant college credit to the extent of five or six semester hours.

CONCLUSIONS CONCERNING REQUIREMENTS FOR GRADUATION.

It is not the intention here to suggest arbitrary standards concerning the requirements for graduation. On the contrary, it is believed that the several institutions can serve their constituencies more efficiently if allowed to function independently and unhampered by injected restrictions. The present study, however, has

called attention to certain variations in practice which, if eliminated, should beneficially affect the work of the institutions both individually and collectively. Absolute dependence should not be placed upon the tabulations and comparisons. They merely suggest without emphasis many opportunities for individual institutions to modify effectively their present practices. Special attention is called here to the necessity for a more *uniform basis for collegiate credit.* The task on the part of prospective students and of school officials who are called upon to advise prospective students would be facilitated if a uniform basis for awarding collegiate credit were followed by the group of colleges under discussion. This does not infer that all colleges should follow the two-semester plan or that all should follow the three-term plan, for it is an easy matter to change term-hour credits to semester-hour credits. It may be advisable, however, for the colleges that use term hours as their unit of credit to publish a statement concerning the relative value of the two units. By far the larger proportion of the colleges have adopted the two-semester plan and, for this reason, the semester hour seems to be the more acceptable unit.

The most urgent need in this respect is for the adoption of a unit of credit that shall have approximately the same value in all of the agricultural colleges. Such a modification in practice will necessitate concerted action on the part of the several colleges. It will call for a definite understanding with regard to the amount of credit that should be granted for each kind of exercise, and it will be necessary to take into consideration the varying needs of the several subjects from the standpoint of the relative proportion of time necessary for outside preparation. To establish a standard credit unit it will be necessary also to harmonize the practice of the several institutions with regard to the amount of work that students are permitted to carry. This alone will not insure equality in scholarship, but it should tend toward uniformity in quantitative requirements for graduation.

The chief deductions from the study of requirements for graduation follow:

1. The lack of uniformity among the colleges in the method for awarding credit renders difficult the comparison of institutions from the standpoint of the amount of work required for graduation and interferes with the free and just exchange of credit for work done in two or more institutions.

2. The great variation among institutions in their quantitative requirements for graduation indicates that in some institutions there is either a great waste of time or that in others quality of work is sacrificed for quantity.

3. The wide difference of practice with regard to the relative proportion of prescribed and elective work offered by the institutions

shows that the question of freedom of election is still a matter of contention. It would seem that one or the other of these two practices, so widely different in principle, should be superior to the other. To some extent the difference in practice undoubtedly is due to institutional differences. Some institutions that are liberally supported and that maintain rigidly prescribed curricula may find it advantageous to make their courses somewhat more elastic than at present, while others that have adopted the free elective system should guard against such freedom of election that is likely to prevent appropriate concentration of effort or that which is not accompanied by the advice of mature instructors.

4. The variation in practice concerning the placement of courses within the four-year schedule suggests a disagreement among colleges concerning principles of education. The most conspicuous disagreement in this respect is the tendency on the part of some colleges to defer the offering of strictly agricultural courses until the sophomore or even the junior year, while others require such work from the very beginning of the course. There is a growing belief that more technical work should be given early in the curriculum. Reference to Table 9 will show other conspicuous variations in practice in this respect.

5. The uneven distribution in the curriculum of the heavy science courses suggests that in making up schedules some institutions apparently give more attention to classroom and laboratory facilities and to the convenience of instructors than to a careful balancing of the student's work.

6. The variation in the content of the curriculum suggests a lack of a clear concept of what should be required for the bachelor's degree in agriculture. The following tabular statement shows the number of colleges in which it would be possible to graduate without instruction in some of the common subjects as listed:

SUBJECTS NOT REQUIRED.

	Number of colleges.		Number of colleges.
Agricultural botany, including plant pathology	18	Veterinary science and practice	31
Bacteriology	8	Farm management	7
Zoology	9	Fruit growing	25
Entomology	12	Vegetable growing	30
Agricultural chemistry	18	Farm mechanics (shopwork)	27
Organic chemistry	16	Farm machinery	21
Qualitative analysis (distinct)	23	Irrigation and drainage	35
Quantitative analysis	30	Drawing	33
Physics (college grade)	14	Surveying	29
Geology	21	Economics or sociology	6
Genetics (plant or animal breeding)	8	Mathematics (college)	18
Poultry husbandry	31	Foreign language (college)	30
Forestry	43	Foreign language (either college or high school)	23

7. The great variation in the distribution of the required work among the various groups or classes of subjects suggests a divergence of views concerning educational aims. There is a tendency among certain institutions during recent years to emphasize the economic and sociological phases of the training, while others place the emphasis upon technical efficiency. The danger lies in a failure to adapt college curricula to the ever-changing economic conditions.

8. In only a few States is any conspicuous attempt being made to consolidate the curricula of the elementary and preparatory schools with the curriculum of the college in such a way as to suggest appropriate sequences embracing the whole period of training for professional agriculture. Such a consolidation contemplates a single and complete program of instruction covering a period of approximately 10 years instead of two or three quite distinct programs of shorter duration.

9. Many colleges still fail to appreciate the importance of requiring a fair degree of proficiency in practical farm operations.

STATISTICAL TABLES.

TABLE 1.—*Form and character of governing boards.*

Institutions.	Governing body.	Total number of members.	Members ex-officio.		Appointed or elected members.			
			Number.	Official position.	Number.	How appointed or elected.	Term, in years.	Political requirements.
Alabama Polytechnic Institute.	Board of trustees	13	2	Governor, State superintendent of education.	11	By governor	12	None.
University of Arizona	Board of regents	10	2	Governor, State superintendent of public instruction.	8	do[1]	4	Not more than 4 members may belong to the same party.
University of Arkansas	Board of trustees	9	2	do	7	do	6	None.
University of California	Regents of the University of California.	23	7	Governor, lieutenant governor, the speaker of assembly, State superintendent of public instruction, president State board of agriculture, president Mechanics Institute, San Francisco, president of the university.	16	do[1]	16	Do.
Colorado Agricultural College	State board of agriculture.	10	2	Governor, the president of the college.	8	do	8	Do.
Connecticut Agricultural College.	Board of trustees	10	1	Governor (president of board).	9	6 by the senate 2 by the alumni 1 by the State board of agriculture.	4 4 1	Do.
Delaware College	do	32	4	Governor, president of State board of education, master of State grange, president of the college.	28	20 by board; 8 by governor.	Life.	Do.
University of Florida	Board of control	5	0		5	By governor	4	Do.
Georgia State College of Agriculture.	Board of trustees	11	0		11	do[2]	Life.	Do.
College of Hawaii	Board of regents	5	0		5	do	5	Do.
University of Idaho	State board of education and board of regents.	6	1	State superintendent of public instruction.	5	do	5	Do.
University of Illinois	Board of trustees	12	3	Governor, superintendent of public instruction, president State board of agriculture.	9	Elected by people	6	Elected on the regular party ticket.
Purdue University (Ind.)	do	9	0		9	By governor[3]	6	None.

[1] With the approval of the senate.
[2] Three members must be selected from the board of trustees of the University of Georgia and 3 from board of directors of Georgia Experiment Station.
[3] Two of the members are nominated by the State board of agriculture, 1 by the State board of horticulture, and 1 by Purdue Alumni Association.

TABLE 1.—*Form and character of governing boards*—Continued.

Institutions.	Governing body.	Total number of members.	Members ex-officio.		Appointed or elected members.			
			Number.	Official position.	Number.	How appointed or elected.	Term, in years.	Political requirements.
Iowa State College of Agriculture and Mechanic Arts.	State board of education.	9	0	.....	9	By governor[1].....	6	Not more than 5 members may belong to same party.
Kansas State Agricultural College.	Board of administration.	4	1	Governor (chairman).....	3	.....do[2].....	4	Appointed without reference to party politics.
University of Kentucky.....	Board of trustees.....	32	11	Governor, president of university, superintendent of public instruction, commissioner of agriculture, and the seven members of State board of agriculture.	21	15 by governor; 6 by alumni.	6	Board must be bi-partisan.
Louisiana State University and Agricultural and Mechanical College.	Board of supervisors..	15	3	Governor, State superintendent of public instruction, president of the university.	12	By governor.....	4	None.
University of Maine.....	Board of trustees.....	8	0	.....	8	7 by governor..... / 1 by alumni[3].....	7 / 3	Do.
Maryland State College of Agriculture.	.....do.....	9	0	.....	9	By governor.....	9	Do.
Massachusetts Agricultural College.	The corporation.....	18	4	Governor, president of the college, commissioner of education, secretary State board of agriculture.	14	.....do.....	7	Do.
Michigan Agricultural College..	State board of agriculture.	8	2	President of college, superintendent of public instruction.[4]	6	Elected by the people.	6	Elected on special ticket.
University of Minnesota.....	Board of regents.....	12	3	Governor, superintendent of public instruction, president of university.	9	By governor.....	6	None.
Mississippi Agricultural and Mechanical College.	Board of trustees.....	9	2	Governor, State superintendent of public instruction.	7	.....do.....	[5] 6	Do.
University of Missouri.....	Board of curators.....	9	0	.....	9	.....do.....	6	Do.
Montana State College of Agriculture and Mechanic Arts.	State board of education.	11	3	Governor, attorney general, State superintendent public instruction.	8	.....do.....	4	Do.
University of Nebraska.....	Board of regents.....	6	0	.....	6	Elected by the people.	6	Elected on party ticket.
University of Nevada.....	.....do.....	5	0	.....	5	.....do.....	[6] 4	Do.
New Hampshire College of Agriculture and Mechanic Arts.	Board of trustees.....	13	2	Governor, president of college.	11	9 by governor; 2 by alumni.	3	Not more than 5 members may belong to the same party.

Rutgers College (N. J.)	Board of trustees[7]	41	3	Governor, chief justice, attorney general.	38	By the board[8]	Life.	None.
New Mexico College of Agriculture and Mechanic Arts.	Board of regents	7	2	Governor, superintendent of public instruction.[6]	5	By governor	4	Not more than 3 members may be from same party.
Cornell University (N. Y.)	Board of trustees	40	8	Governor, lieutenant governor, speaker of assembly, commissioner of education, commissioner of agriculture, president of State agricultural society, president of university, librarian of university.	32	5 by governor 15 by the board 10 by the alumni 1 by bequest[9]	5 5 5 Life.	A majority of the members must not be of the same religious sect.
North Carolina College of Agriculture and Engineering.	do	17	1	Governor	16	By governor	8	None.
North Dakota Agricultural College.	Board of regents	5	0		5	do	6	Do.
Ohio State University	Board of trustees	7	0		7	do	7	Do.
Oklahoma Agricultural and Mechanical College.	State board of agriculture.	5	0		5	4 by governor; 1 elected by people.	4	The president of the board is a salaried official and elected on the party ticket.
Oregon State Agricultural College.	Board of regents	13	4	Governor, secretary of State, superintendent of public instruction, master of State grange.	9	By governor	9	None.
Pennsylvania State College	Board of trustees	31	4	Governor; superintendent of public instruction, president of college, secretary of State board of agriculture.	27	6 by governor, 9 by alumni, and 12 by delegates representing organized agriculture and industry.	3	None.
University of Porto Rico	do	7	3	Commissioner of education (president), speaker of house of delegates, treasurer of Porto Rico.	4	By governor	Indeterminate.	Do.
Rhode Island State College	Board of managers	7	1	State commissioner of public schools.	6	5 by governor 1 by State board of agriculture.	5 2	Do.
Clemson Agricultural College (S. C.).	Board of trustees	13	0		13	6 by governor 7 designated by bequest and are self-perpetuated.	4 Life.	Do.

[1] With the approval of the senate.
[2] The members of the board are salaried officials.
[3] Nominated by the alumni and appointed by the governor.
[4] Without the voting privilege.
[5] One member is appointed for 4 years only.
[6] One member is appointed for 2 years only.
[7] The constitution also provides for a board of visitors consisting of 21 members, 1 from each county, appointed by the governor, each for a period of 2 years.
[8] Five members are appointed by the board upon nomination of the alumni association.
[9] The eldest lineal male descendant of Ezra Cornell is a trustee during his life.

TABLE 1.—*Form and character of governing boards*—Continued.

Institutions.	Governing body.	Total number of members.	Members ex-officio.		Appointed or elected members.			
			Number.	Official position.	Number.	How appointed or elected.	Term, in years.	Political requirements.
South Dakota State College of Agriculture and Mechanic Arts.	Regents of education	5	0		5	By governor[1]	6	Must be selected from the different political parties of the State.
University of Tennessee	Board of trustees	18	4	Governor, superintendent of public instruction, commissioner of agriculture, president of university.	14	do	12	1 member must be selected from each of the congressional districts and 1 from each of the cities Knoxville and Memphis.
Agricultural and Mechanical College of Texas.	Board of directors	9	0		9	do	6	None.
Agricultural College of Utah	Board of trustees	13	1	Secretary of State	12	do[1]	4	Do.
University of Vermont and State Agricultural College.	do	20	2	Governor, president of university.	18	By the legislature	9 for life. 9 for 6 years.	Do.
Virginia Agricultural and Mechanical College and Polytechnic Institute.	Board of visitors	10	2	Superintendent of public instruction, president of board of agriculture and immigration.	8	By governor	4	Do.
State College of Washington	Board of regents	5	0	(2)	5	do	6	Do.
West Virginia University	Board of control[3]	3	0		3	do[4]	6	Not more than 2 from dominant political party.
	Board of regents	5	1	Superintendent of public free schools.[5]	4	do	4	Not more than 3 from dominant political party.
University of Wisconsin	do	15	2	President of university, superintendent of public instruction.	13	do	6	1 member from each congressional district and 2 at large; 2 members must be women.
University of Wyoming	Board of trustees	11	2	President of college, superintendent of public instruction.[6]	9	do[1]	6	None.

[1] With the approval of the senate.
[2] The president of the college is ex officio secretary of the board without a vote. The governor of the State is regarded as advisory member ex officio.
[3] The business affairs of the university are under the board of control and the academic affairs are under the board of regents.
[4] The members of the board are salaried officers.
[5] The superintendent of public free schools is elected by the people on the regular party ticket.
[6] Without the voting privilege.

TABLE 2.—*Agricultural curricula offered by the land-grant colleges.*

[The offering of curricula requiring one or more scholastic years is indicated by listing the corresponding degrees or certificates, and the offering of one of the shorter curricula is indicated by listing the subject and the duration.]

Institutions.	Graduate work.	Four-year curricula.	Three-year curricula.	Two-year curricula.	One-year curricula.	Short curricula.[1]		Summer session.
						Subject.	*Weeks.*	*Weeks.*
Alabama Polytechnic Institute	M. S	B. S		Certificate.				6
University of Arizona	M. S	B. S		do				0
University of Arkansas		B. S. A				General agriculture	12	6
University of California	M. S., Ph. D	B. S	Certificate.			do	6	6
						Horticulture	6	
						Dairy manufacturing	6	
						Poultry	6	
						Creamery	4	
						Dairy	2	
						Butter	2	
						Cheese	2	
						Tractors	2	
Colorado Agricultural College		B. S	do					0
Connecticut Agricultural College		B. S		Certificate.		Dairying	12	6
						Poultry	12	
Delaware College	M. S	B. S		do				6
University of Florida	M. S. A	B. S. A		G. F.[2]	Certificate.	General agriculture	16	0
						do	2	
Georgia State College of Agriculture	M. S. Agr	B. S. Agr., B. S. For			do	do	12	6
						do	2	
College of Agriculture and Mechanic Arts of the Territory of Hawaii.	M. S. A	B. S						0
University of Idaho	M. S. Agr	B. S. Agr	Certificate.			Dairying	20	6
University of Illinois	M. S., Ph. D	B. S				General agriculture	2	8
Purdue University (Ind.)	M. S. A	B. S. A				do	8	12
Iowa State College of Agriculture and Mechanic Arts.	M. S. in Agr., M. S. in For.	B. S. in (any major subject).		Certificate.	Certificate.	Dairying	2	6
Kansas State Agricultural College	M. S	B. S	Certificate.	do		do	8	9
University of Kentucky	M. S. Agr	B. S. Agr				General agriculture	16	0
Louisiana State University and Agricultural and Mechanical College.	M. S	B. S				do	2	9
University of Maine	M. S	B. S		Certificate.		do	6	6
Maryland State College of Agriculture	M. S	B. S		do		do	10	6
Massachusetts Agricultural College	M. S., M. Agr., Ph. D., D. Agr.	B. S		do		Bee keeping	2	6
						General agriculture	10	

[1] Curricula shorter than 10 days' duration are not listed.

[2] Graduate in farming.

TABLE 2.—*Agricultural curricula offered by the land-grant colleges*—Continued.

[The offering of curricula requiring one or more scholastic years is indicated by listing the corresponding degrees or certificates, and the offering of one of the shorter curricula is indicated by listing the subject and the duration.]

Institutions.	Graduate work.	Four-year curricula.	Three-year curricula.	Two-year curricula.	One-year curricula.	Short curricula.		Summer session.
						Subject.	*Weeks.*	*Weeks.*
Michigan Agricultural College	M. S., M. Agr., M. Hort., M. For.	B. S.		Certificate		General agriculture	8	6
University of Minnesota	M. S., Ph. D	B. S.	Certificate.			Dairying	4	6
						Traction engine	5	
Mississippi Agricultural and Mechanical College.	M. S. A	B. S.		Certificate.				6
University of Missouri	M. F., A. M., Ph. D	B. S. in Agr., B. S. in For.		do		Creamery	7	8
Montana State College of Agriculture and Mechanic Arts.	M. S	B. S.	Certificate.					6
University of Nebraska	M. S., Agr. Eng., M. S. in Agr. Eng., Ph. D.	B. S.		Certificate.				8
University of Nevada	M. S	B. S.				General agriculture	10	6
New Hampshire College of Agriculture and Mechanic Arts.	M. S	B. S.		Certificate.		Dairying	5	0
Rutgers College (N. J.)	M. Sc., Ph. D	B. S.				Dairy farming	12	
						Horticulture	12	
						Poultry	12	
						Bee husbandry	12	
New Mexico College of Agriculture and Mechanic Arts.	M. S	B. S.				General agriculture	6	0
Cornell University (N. Y.)	M. S. A., M. S. For., M. L. D.,[1] Ph. D.	B. S.				do	12	6
						Dairy	12	
						Poultry	12	
						Fruit	12	
						Flowers	12	
						Vegetables	12	
North Carolina College of Agriculture and Engineering.	M. S	B. S.		Certificate.	Certificate.	General agriculture	4	4
North Dakota Agricultural College	M. S	B. S.	Certificate.			do	10	0
Ohio State University	M. S., Ph. D	B. S.	do			do	8	0
						Dairying	8	
						Poultry	8	
Oklahoma Agricultural and Mechanical College.	M. S	B. S.	do					8
Oregon State Agricultural College	M. S	B. S.			Certificate.	Forestry	20	6
						General agriculture	4	
Pennsylvania State College	M. S	B. S.		Certificate.		do	12	6
University of Porto Rico		B. S.	Certificate.					0
Rhode Island State College	M. S	B. S.		Certificate.		Poultry	6	0

Clemson Agricultural College (S. C.)		B. S			Certificate.	General agriculture	[2] 4	4
						Cotton grading	[2] 4	
						Corn growing	[2] 4	
South Dakota State College of Agriculture and Mechanic Arts.	M. S	B. S	([3])			Creamery	12	6
						Traction engine	20	
University of Tennessee	M. S. A	B. S. A				General agriculture	8	6
Agricultural and Mechanical College of Texas	M. S. in Agr	B. S		Certificate.		Cotton classing	6	0
						Butter making	2	
Agricultural College of Utah		B. S		do		General agriculture	18	6
University of Vermont and State Agricultural College.	M. S	B. S				do	5	6
						Creamery	4	
Virginia Agricultural and Mechanical College and Polytechnic Institute.	M. S	B. S		Certificate.		General agriculture	4	6
State College of Washington	M. S	B. S				do	6	6
West Virginia University	M. S. Agr	B. S. Agr						6
University of Wisconsin	M. S., Ph. D	B. S		Grad. Agr.		Dairy manufacturing	12	6
				Certificate.		Dairying	10	
University of Wyoming	M. S	B. S		Certificate.				6

[1] Master landscape design. [2] Given during the summer. [3] A secondary curriculum covering four years of five months each, leading to a certificate.

TABLE 3.—*Major options and opportunities for specialization in the four-year agricultural curricula.*[1]

[Each opportunity for specialization is represented by a cross ×.]

Institutions.	Agriculture (general).	Agricultural education.	Agricultural engineering or farm mechanics.	Agricultural journalism.	Agronomy or farm crops.	Animal husbandry.	Bacteriology or microbiology.	Biology or economic biology.	Botany or plant pathology.	Chemistry or agricultural chemistry.	Dairy husbandry.	Dairy industries.	Entomology or zoology.	Farm management.	Floriculture.	Forestry.	Genetics or plant breeding.	Horticulture.	Landscape gardening.	Olericulture or vegetable gardening.	Pomology or fruit growing.	Poultry husbandry.	Rural economics, markets, etc.	Soils and fertilizers.	Veterinary science.	Miscellaneous.
Alabama Polytechnic Institute					×	×			×	×						×		×								
University of Arizona			×		×	×		×		×								×					×			
University of Arkansas		×			×	×												×								×
University of California[1]		×	×		×	×			×	×		×	×		×	×	×		×	×	×	×	×	× ×	×	× × ×
Colorado Agricultural College					×	×							×			×		×								
Connecticut Agricultural College		×			×		×		×	×	×															
Delaware College					×	×												×								
University of Florida		×			×	×				×								×								
Georgia State College of Agriculture			×		×	×				×								×								
College of Agriculture and Mechanic Arts of the Territory of Hawaii	×																									×
University of Idaho					×	×					×							×								
University of Illinois[1]	×	×	×		×	×			×	×	×		×	×	×			×	×	×	×		×	×		
Purdue University (Ind.)	×	×			×	×				×	×				×			×		×		×				
Iowa State College of Argiculture and Mechanic Arts		×	×		×	×					×	×		×	×	×			×	×	×	×			×	
Kansas State Agriculture College			×		×	×					×							×				×			×	×
University of Kentucky					×	×	×		×	×	×		× ×					×								
Louisiana State University and Agricultural and Mechanical College		×			×	×					×					×		×							×	
University of Maine					×	×		×			×					×		×				×				
Maryland State College of Agriculture		×	×		×	×		×			×							×								×
Massachusetts Agricultural College	×	×		×	×	×	×		×	×	×		×		×	×			×		×	×	×			×
Michigan Agricultural College					×	×					×					×		×	×		×	×		×		×
University of Minnesota		× ×			×	×			×	×	×		×			×		×					×	×		× × ×
Mississippi Agricultural and Mechanical College			×		×	×	×		×	×	×		×	×				×				×	×		×	
University of Missouri					×	×				×	×					×		×	×					×		
Montana State College of Agriculture and Mechanic Arts		×			×	×					×							×								
University of Nebraska			×		×	×			×	×	×		×	×				×								
University of Nevada			×		×	×																				
New Hampshire College of Agriculture and Mechanic Arts		×				×										×		×								
Rutgers College (N. J.)											×			×						×	×	×		×		
New Mexico College of Agriculture and Mechanic Arts					×	×												×								

Cornell University (N. Y.)[1]		X	X		X	X			X	XX		X	X	X	X	X	X		X	X	X	X	X	X		XX
North Carolina College of Agriculture and Engineering		X			X	X												X				X			X	
North Dakota Agricultural College	X	X			X	X			X	X	X							X								
Ohio State University[1]		X	X		X	X			X		X		X		X	X			X	X	X		X	X		
Oklahoma Agricultural and Mechanical College					X	X					X							X								
Oregon State Agricultural College	X	X	XX		X	X	X		X	X	X	X	XX		X					X	X	X		X	X	
Pennsylvania State College		X			X	X			X	X	X					X		X	X							
University of Porto Rico	X	X																								
Rhode Island State College	X					X		X		X								X								
Clemson Agricultural College (S. C.)					X	X			X	X	X		X					X						X	X	
South Dakota State College of Agriculture					X	X					X							X								
University of Tennessee		X	X		X	X			X	X	X		X					X							X	
Agricultural and Mechanical College of Texas		X	X		X	X		X		X	X		X					X	X							
Agricultural College of Utah					X	X	X		X	X	X		X					X							X	
University of Vermont and State Agricultural College		X																								XX
Virginia Agricultural and Mechanical College and Polytechnic Institute	X		X															X							X	
State College of Washington	X				X	X					X							X	X			X		X		
West Virginia University		X			X	X					X		X	X						X	X	X		X		
University of Wisconsin[1]		X	X	X	X	X	X		X	X	X		X				X	X				X	X	X	X	
University of Wyoming					X	X																				
Frequency	10	25	17	2	43	44	7	5	18	24	31	4	17	7	8	14	3	36	11	9	10	15	9	13	12	10

[1] In the tabulations, separate agricultural curricula, major options, and opportunities for specialization are counted. In a few institutions, through a liberal elective system, opportunity for specialization is offered in any phase of agriculture in which instruction is offered.

TABLE 4.—*Requirements for admission.*

Institutions.	Age requirements.		Scholastic requirements.													Conditional admission.	
				Prescribed units.										Optional units.			
	For regular students.	For special students.	Entrance units required.	English.	Foreign language.	History or social science.	Algebra.	Geometry.	Advanced arithmetic.	Mathematics.	Physics.	Science.[1]	Total prescribed units.	Total optional units.	Units accepted in vocational subjects.	Number of deficient units approved.	Time for removal of conditions (years).
Alabama Polytechnic Institute	[2] 15	21	14	3	.....	1	1½	1½	½	.....	.....	.....	7½	6½	(3)	2	2
University of Arizona	16	21	15	3	.....	1	1½	1	.....	.....	.....	1	7½	7½	(3)	2	2
University of Arkansas	(4)	18	14	3	.....	1	1½	1	.....	.....	.....	1	7½	6½	4	2	1
University of California	16	21	15	2	2	1	1	1	.....	.....	.....	2	9	6	3	(4)	2
Colorado Agricultural College	(4)	(4)	15	3	.....	2	.....	.....	.....	2	1	1	9	6	(3)	(5)	.....
Connecticut Agricultural College	16	21	(6)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	(6)	.....
Delaware College	16	19	14	3	2	1	1½	1	.....	.....	.....	1	9½	4½	(3)	2	(4)
University of Florida	16	21	16	3	[7] 2	1	2	1	.....	.....	.....	1	10	6	4	2	1
Georgia State College of Agriculture	16	20	14	3	2	2	1½	1	.....	.....	.....	.....	9½	4½	(3)	[8] 2	(4)
College of Agriculture and Mechanic Arts of the Territory of Hawaii	(4)	18	15	3	.....	.....	.....	.....	.....	2½	1	.....	6½	8½	(3)	[9] 1	1
University of Idaho	16	21	15	3	.....	1	1	1	.....	.....	.....	[10] 1	7	8	4	1	2
University of Illinois	16	21	15	3	.....	.....	1	1	.....	.....	.....	2	7	8	3	[11] 1	1
Purdue University (Ind.)	16	21	15	3	2	1	1½	1	.....	.....	1	.....	9½	5½	1	(12)	.....
Iowa State College of Agriculture and Mechanic Arts	16	21	15	3	.....	1	1½	1	.....	.....	.....	.....	6½	8½	4	1	1
Kansas State Agricultural College	14	21	15	3	.....	.....	1	1	.....	.....	1	.....	6	9	(3)	1	1
University of Kentucky	(4)	21	15	3	2	1	1½	1	.....	.....	.....	1	9½	5½	2	2	1
Louisiana State University and Agricultural and Mechanical College	16	20	14	3	.....	1	1½	1	.....	.....	.....	.....	6½	7½	(3)	2	1
University of Maine	(4)	21	14½	3	2	1	1½	1	.....	.....	.....	1	9½	5	4	.....	.....
Maryland State College of Agriculture	(4)	(4)	15	3	[13] 2	2	1½	1	.....	.....	1	.....	10½	4½	(3)	3	1
Massachusetts Agricultural College	16	18	14	3	2	1	1½	1	.....	.....	.....	.....	8½	5½	2	2	4
Michigan Agricultural College	15	(4)	15	3	.....	.....	1	1	.....	.....	.....	.....	5	10	7	[14] 2	(4)
University of Minnesota	(4)	21	15	[15] 4	.....	.....	1	1	.....	.....	.....	.....	6	9	4	[14] 1	(4)
Mississippi Agricultural and Mechanical College	16	20	12	2½	.....	1	1	1	.....	.....	.....	.....	5½	6½	(3)	[16] 1	(4)
University of Missouri	(4)	21	15	3	.....	.....	1	.....	.....	.....	.....	.....	4	11	4	(4)	1
Montana State College of Agriculture and Mechanic Arts	16	21	15	3	.....	1	.....	.....	.....	2	.....	1	7	8	(3)	2	1
University of Nebraska	(4)	21	15	3	.....	.....	.....	.....	.....	2	.....	1	6	9	4	1	½

University of Nevada	(4)	20	15	3		1				2½		2	8½	6½	(3)	2	1
New Hampshire College of Agriculture and Mechanic Arts	(4)	(4)	15	3		1	1	1				1	7	8	4	[12] 1	(4)
Rutgers College (N. J.)	(4)		15	3	2	½	2	1½				1	10½	4½	½	2	1
New Mexico College of Agriculture and Mechanic Arts	(4)	(4)	15	4		2	1	1				1	9	6	(3)	2	1
Cornell University (N. Y.)	[2] 16	[17] 21	15	3	3	1	1	1					9	6	4	[14] 1	1
North Carolina College of Agriculture and Engineering	16	16	11	3		2	1½	1				1	8½	2½	(3)		
North Dakota Argicultural College	(4)	(4)	15	3	3	[18] 1				2		1	10	5	(3)	½	1
Ohio State University	(4)	21	15	2	2	1				2	1		8	7	5	1	1
Oklahoma Agricultural and Mechanical College	16	21	15	3		1	1	1				1	7	8	(3)	1	2
Oregon State Agricultural College	16	18	15	3			1	1					5	10	(3)	(14)	1
Pennsylvania State College	(4)	21	15	3	2	1	1	1				2	10	5	(3)		
University of Porto Rico	(4)	(4)	14													(4)	
Rhode Island State College	(4)	(4)	14	3	2	1	1	1			1		9	5	2	1	(4)
Clemson Agricultural College (S. C.)	16	(4)	12	3		1				3		1	8	4	(3)		
South Dakota State College of Agriculture and Mechanic Arts	14	(4)	15	3	[19] 2	2	1	1			1		10	5	3	1	1
University of Tennessee	16	21	14	3						2		3	8	6	4	2	1
Agricultural and Mechanical College of Texas	16	21	14	3			1½	1					5½	8½	4	2	2
Agricultural College of Utah	(4)	(4)	[20] 16	3		1				2		3	9	7	(3)	(14)	4
University of Vermont	16	(4)	14½	3	2	1	1½	1				1	9½	5	2	2	1
Virginia Agricultural and Mechanical College and Polytechnic Institute	16		14	3		2	1½	1½					8	6	(3)	2	2
State College of Washington	16	[17] 23	15	3						[21] 2			5	10	4	1	1
West Virginia University	(4)	21	15	3	2	1	1	1				1	9	6	3	2	1
University of Wisconsin	(4)	21	14	2	2		1	1					6	8	4	[8] 2	1
University of Wyoming	(4)	(4)	15	3	2	2	1½	1½			1		10	5	(3)	2	1

[1] In some cases agriculture is accepted as science.
[2] Women students must be at least 17 years of age.
[3] Practically no limit to the number of elective units that may be offered in vocational subjects.
[4] No stated limit, or each case is considered on its own merits.
[5] Students who are deficient in entrance units may enter the "school of agriculture" where opportunity to make up deficiencies is afforded.
[6] Entrance requirements are not based upon high-school units.
[7] History and science may be offered in place of a foreign language.
[8] Applicants presenting a total of 14 units, but deficient in foreign language, may be admitted.
[9] Only applicants deficient in physics are admitted with conditions.
[10] Agriculture may be included.
[11] Applicants must present a total of 15 units, including 3 in English, 1 in algebra, 1 in geometry, and 1 in science.
[12] Applicants are accepted conditionally "only in exceptional cases."
[13] Agriculture may be substituted for foreign language.
[14] Applicants who meet the total requirements, but who are deficient in some of the prescribed work, may be admitted conditionally.
[15] Four units of foreign language may be substituted for the fourth unit of English.
[16] Only applicants deficient in geometry are admitted with conditions.
[17] Applicants who meet regular entrance requirements are admitted at 16 years of age.
[18] A great variety of combinations of these units may be accepted. The English requirement is fixed, but three units may be offered in any one of the other four required subjects; and two units may be offered in any one of the remaining three subjects; and one unit in each of the remaining two subjects.
[19] Required only of candidates from schools where the subject is taught.
[20] One unit for approved occupational experience may be offered.
[21] One unit in physical science may be offered in place of the second unit of mathematics.

TABLE 5.—*Comparing the 1912–13 requirements for admission with those of 1917–18.*

Institutions.	Years of high-school work.		Entrance units.		Prescribed units.	
	1912–13	1917–18	1912–13	1917–18	1912–13	1917–18
Alabama Polytechnic Institute	3	4	12	14	7	7½
University of Arizona	4	4	15	15	10	7½
University of Arkansas	4	4	13	14	8	7½
University of California	4	4	15	15	10	9
Colorado Agricultural College	4	4	15	15	9	9
Connecticut Agricultural College	2	4	8	14	.....	.....
Delaware College	2½	4	10	14	9½	9½
University of Florida	3	4	12	16	10	10
Georgia State College of Agriculture	4	4	14	14	7½	9½
College of Agriculture and Mechanic Arts of the Territory of Hawaii	4	4	15	15	10	6½
University of Idaho	4	4	15	15	9½	9
University of Illinois	4	4	15	15	7½	7
Purdue University (Ind.)	4	4	15	15	9½	9½
Iowa State College of Agriculture and Mechanic Arts	4	4	15	15	8½	6½
Kansas State Agricultural College	2	4	8	15	5	6
University of Kentucky	4	4	15	15	9½	9½
Louisiana State University and Agricultural and Mechanical College	4	4	14	14	6½	6½
University of Maine	4	4	14	14½	9½	9½
Maryland State College of Agriculture	1½	4	6	15	6	10½
Massachusetts Agricultural College	4	4	14	14	9	8½
Michigan Agricultural College	4	4	15	15	7	5
University of Minnesota	4	4	15	15	6	6
Mississippi Agricultural and Mechanical College	1	2½	5	10	3	5½
University of Missouri	4	4	15	15	4	4
Montana State College of Agriculture and Mechanic Arts	4	4	15	15	10	7
University of Nebraska	4	4	15	15	8½	6
University of Nevada	4	4	15	15	4	8½
New Hampshire College of Agriculture and Mechanic Arts	4	4	15	15	11½	7
Rutgers College (N. J.)	3+	4	14	15	11	10½
New Mexico College of Agriculture and Mechanic Arts	4	4	15	15	10	9
Cornell University (N. Y.)	4	4	15	15	9	9
North Carolina College of Agriculture and Engineering	1	3	4	11	3	8½
North Dakota Agricultural College	4	4	14	15	8	10
Ohio State University	3	4	12	15	10	8
Oklahoma Agricultural and Mechanical College	2	4	8	15	8	7
Oregon State Agricultural College	2	4	9	15	4½	5
Pennsylvania State College	4	4	14	15	12	10
University of Porto Rico	4	4	14	14	7½	.....
Rhode Island State College	4	4	14	14	8½	9
Clemson Agricultural College (S. C.)	2	3	8	11	8	7
South Dakota State College of Agriculture and Mechanic Arts	4	4	14	15	10	8
University of Tennessee	4	4	14	14	8	8
Agricultural and Mechanical College of Texas	1	4	4	14	4	5½
Agricultural College of Utah	3	4	11	16	.....	9
University of Vermont and State Agricultural College	4	4	14½	14½	9½	9½
Virginia Agricultural and Mechanical College and Polytechnic Institute	2½	4	10	14	7	8
State College of Washington	4	4	15	15	7½	6
West Virginia University	4	4	14	15	9	9
University of Wisconsin	4	4	14	14	6	6
University of Wyoming	4	4	15	15	9½	10
Median	4	4	14	15	8½	8

TABLE 6.—*Maximum and minimum entrance credit allowed for the various high-school subjects.*

[Whenever the credit value is expressed by one figure only, it is listed in the maximum column, except where the contrary meaning is obvious.]

Institutions.	Language.																																									
	English.		Latin.		Greek.		French.		German.		Spanish.		Other languages.		Nonspecified foreign languages.		Mathematics.																									
																	Algebra.		Plane geometry.		Solid geometry.		Trigonometry.		Advanced algebra.		Nonspecified mathematics.		Natural science.													
																													Physiography and geology.		Physics.		Chemistry.		Botany.		Zoology.		Physiology.		General biology.		General science.		Nonspecified science.	
	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.
Alabama Polytechnic Institute		3	4	1	2	1	2	1	2	1	2	1					1½		1		½		½						½		1	½	2	½	1	½	1	½	1	½				
University of Arizona		3	4	2	2		2		2		2						1½		1		½								1	½	1		1		1									
University of Arkansas	4	3	4	1	3	1	4	1	4	1	2	1					1		1		½		½		½				1	½	1	½	1	½	1	½			1	½	1	½		
University of California	4	2	5	1	3	1	4	1	4	1	4	1					1		1		½		½		1	½			1		1		1		1		1						1	
Colorado Agricultural College	5	3	4	1	3	1	3	1	3	1	2	1																2			1		1										2	
Connecticut Agricultural College [1]																																												
Delaware College		3	4	1	4	1	4	1	4	1							1½		1		1		½						1	½	1		1		1		1			½				
University of Florida	4	3	4	1			2	2	2	2	2	2					1		1		½		½		1				1		1		1		1	½	1	½						
Georgia State College of Agriculture	4	3	4	1	3	1	2	1	2	1	2	1					1		1		½		½		1	½			1	½	1	½	1		1	½	1	½	½		1			
College of Agriculture and Mechanic Arts of the Territory of Hawaii		3														(2)												2½																(2)
University of Idaho		3	2	2			2	2	2	2	2	2					1		1		½				½						1		1		1		1							
University of Illinois	4	3	4	1	3	1	4	1	4	1	4	1	4	1			1		1		½		½		½				2	½	2	1	2	1	1	½	1	½	1	½				
Purdue University (Ind.)	4	3	4	1			3	1	3	1							1		1		½		1	½	½				1	½	1		1		1		1		1	½				
Iowa State College of Agriculture and Mechanic Arts	4	3	4	1	4	1	4	1	4	1	4	1					1½		1		½		½		½				1	½	1		1		1	½	1	½	½					
Kansas State Agricultural College	4	3	4	1	4	1	4	1	4	1	4	1					1½	1	1		½		½		½				1	½	1		1		1	½	1	½	1	½	1	½		
University of Kentucky	4	3	4	1	3	1	2	1	3	1	3	1					1½		1		½		½						2	½	1		1	½	1	½	1	½	1	½				
Louisiana State University and Agricultural and Mechanical College		3	3	1	1		3	1	3	1	3	1					1½		1										1	½	1	½	1	½	1	½	1	½						
University of Maine		3	4	2	3	2	4	2	4	2	4	2					1½		1		½		1		½				1	½	1		1		1		1				1			
Maryland State College of Agriculture		3	2	1			2	1	2	1	2	1					1		1		½		½		½				1		1		1			1			½					
Massachusetts Agricultural College	4	3	3	2	3	2	4	2	4	2							1½	1½	1	1	½	½	½						1	1	1	1	1	1	1	½		½	½					
Michigan Agricultural College	4	3	4	2	4	2	4	2	4	2	4	2					1	1	1	1	½	½	½	½	½	½			1	½	1	1	1	1	1		1	½						
University of Minnesota	4	3	4	1	4	1	4	1	4	1	4	1	4	1			1		1		½		½		½				1	½	1		1		1		1		½					
Mississippi Agricultural and Mechanical College	3	2½	3	1	2	1	2	1	2	1	2	1					1	1	1	1					1				(2)		(2)		(2)		(2)		(2)		(2)					
University of Missouri	4	3	4	2	3	2	3	2	3	2	3	2					1½	1	1	1	½	½	½	½	½	½			1	1	2	1	2	1	2	1	2	1	1	1	1	1		
Montana State College of Agriculture and Mechanic Arts		3														(2)												(2)	2															(2)	1

[1] The Unit credit system is not employed.

[2] Units to be determined.

TABLE 6.—*Maximum and minimum entrance credit allowed for the various high-school subjects*—Continued.

[Whenever the credit value is expressed by one figure only, it is listed in the maximum column, except where the contrary meaning is obvious.]

Institutions.	Language.																																											
	English.		Latin.		Greek.		French.		German.		Spanish.		Other languages.		Nonspecified foreign languages.		Mathematics.												Natural science.															
																	Algebra.		Plane geometry.		Solid geometry.		Trigonometry.		Advanced algebra.		Nonspecified mathematics.		Physiography and geology.		Physics.		Chemistry.		Botany.		Zoology.		Physiology.		General biology.		General science.		Nonspecified science.	
	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.
University of Nebraska	4	3	..	..	..	..	..	..	..	..	..	..	..	..	4	2	..	1	..	1	..	..	..	..	..	..	4	..	..	..	2	1	2	1	..	..	..	..	..	..	..	..	2	1
University of Nevada	4	2	4	1	2	1	2	1	2	1	2	1	..	..	..	..	1	..	1	..	½	..	½	..	1	..	..	..	1	½	1	..	1	..	1	½	1	½	1	..	..	..	1	..	..	..
New Hampshire College of Agriculture and Mechanic Arts	..	3	3	2	..	..	2	1	2	1	..	..	..	..	..	..	1	..	1	..	½	..	½	..	½	..	..	..	..	..	1	½	..	..	1	½	1	½	..	..	..	..	..	..	..	..
Rutgers College (N. J.)	..	3	4	2	3	2	3	2	3	2	..	..	..	..	..	..	1	1	1	..	½	..	½	..	1	1	..	..	..	..	1	..	1	..	1	..	1	..	..	..	1	..	..	..	..	..
New Mexico College of Agriculture and Mechanic Arts	(1)	..	..	..	..	..	..	..	..	..	..	..	..	..	(1)	..	..	..	..	..	..	..	..	..	..	..	(1)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	(1)	..
Cornell University (N. Y.)	3	1½	4	1	3	1	3	1	3	1	3	1	3	1	..	..	1½	1	1	1	½	½	1	½	½	½	..	..	1	½	1	1	1	1	1	½	1	½	..	..	1	½	..	..	..	..
North Carolina College of Agriculture and Engineering	..	3	4	1	..	..	1	½	1	½	1	½	..	..	..	..	1½	1½	1	1	..	..	..	..	..	..	..	..	1	½	1	½	1	½	1	½	1	½	1	½	..	..	½	½	..	..
North Dakota Agricultural College	..	3	..	..	..	..	..	..	..	..	..	..	..	..	(1)	1	..	..	..	..	..	..	..	..	..	..	(1)	½	½	½	1	1	1	1	..	½	..	½	..	½	..	½	..	..	..	..
Ohio State University	4	1	4	1	3	1	4	1	4	1	4	1	..	..	..	..	1	1	1	1	½	½	½	½	½	½	..	..	2	½	1	1	1	1	1	½	1	½	..	½	..	½	..	..	..	..
Oklahoma Agricultural and Mechanical College	..	3	..	..	..	..	..	..	..	..	..	..	..	..	(1)	1	1	1	1	1	½	½	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	(1)	..
Oregon State Agricultural College	..	3	..	..	..	..	..	..	..	..	..	..	..	..	(1)	..	1½	1	1	1	½	½	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	(1)	..
Pennsylvania State College	..	3	4	1	3	1	4	2	4	2	3	2	..	..	..	..	1	1	1	1	½	½	½	½	½	½	..	..	2	1	1	1	1	1	1	1	1	1	1	1	..	..	..	..	..	..
University of Porto Rico	4	3	..	..	..	..	..	..	..	..	3	..	..	..	(1)	..	..	..	..	..	..	..	..	..	..	..	(1)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	(1)	..
Rhode Island State College	..	3	4	1	..	..	4	2	4	2	..	..	..	..	..	..	1½	..	1	..	½	..	..	..	..	..	..	..	1½	½	..	..	1	..	1	..	1	..	½	..	..	..	..	..	..	..
Clemson Agricultural College (S. C.)	..	3	3	1	..	..	3	1	3	1	..	..	..	..	..	..	1	..	1	..	..	..	..	..	1	..	..	..	1	½	1	½	..	..	1	½	..	..	1	½	..	..	..	..	..	..
South Dakota State College of Agriculture and Mechanic Arts	..	3	4	2	..	..	4	2	4	2	..	..	..	..	..	..	1	2	1	1	½	½	..	..	..	..	..	..	1	½	1	1	..	..	1	..	1	..	½	..	1	..	..	..	..	..
University of Tennessee	..	3	4	..	3	..	3	..	3	..	3	..	..	..	..	..	1½	..	1	..	½	..	½	..	½	..	..	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	..	..	..	..
Agricultural and Mechanical College of Texas	4	3	4	1	..	..	2	1	2	1	2	1	..	..	..	..	1½	1½	1	1	½	..	½	..	..	..	..	..	½	..	1	..	1	..	1	½	..	..	½	..	..	..	..	..	..	..
Agricultural College of Utah	(1)	..	..	..	..	..	..	..	..	..	..	..	..	..	(1)	..	..	..	..	..	..	..	..	..	..	..	(1)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	(1)	..
University of Vermont and State Agricultural College	..	3	4	2	3	2	4	1	4	1	2	1	..	..	..	..	1½	..	1	..	½	..	½	..	½	..	..	..	½	..	1	..	1	..	1	½	1	½	1	½	..	..	..	..	..	..
Virginia Agricultural and Mchanical College and Polytechnic Institute	4	3	5	1	3	1	4	1	4	1	4	1	..	..	..	..	1½	..	1	..	½	..	½	..	..	..	..	..	1	½	1	..	1	..	1	½	1	½	1	½	..	..	..	..	..	..
State College of Washington	4	3	4	2	3	2	4	2	4	2	4	2	4	2	..	..	1	..	1	..	½	..	½	..	½	..	..	..	1	½	1	½	1	½	1	½	1	½	..	..	..	..	..	..	..	..
West Virginia University	4	3	4	1	2	1	3	1	3	1	..	..	..	..	..	..	1½	1	1	..	½	..	½	..	½	..	..	..	..	..	1	..	1	..	1	..	1	..	..	..	..	½	..	..	..	..
University of Wisconsin	4	2	4	1	2	1	4	1	4	1	2	1	2	2	..	..	1½	1	1	..	½	..	½	..	..	..	..	..	2	1	2	1	2	1	2	1	2	1	½	..	..	..	..	..	..	..
University of Wyoming	4	3	4	2	3	2	3	2	3	2	..	..	..	..	..	..	1	..	1	..	½	..	½	..	½	..	..	..	½	..	1	..	1	..	1	½	1	½	½	..	1	..	..	..	..	..

[1] Units to be determined.

Institutions.	History and social science.																Vocational subjects.																								Normal training.	
	Greek and Roman history.		Medieval and modern history.		English history.		American history.		General history.		Economics and sociology.		Civics.		Non-specified social science.		Agriculture.		Drawing, art and designing.		Drawing, mechanical.		Manual training or shop work.		Domestic science.[1]		Domestic art.		Commercial law.		Commercial geography.		Bookkeeping and business arithmetic.		Stenography and typewriting.		Music.		Non-specified vocational subjects.		Pedagogy, psychology, etc.	
	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.
Alabama Polytechnic Institute	1	...	1	...	1	...	1	...	...	...	...	...	1	½	...	...	2	½	1	½	2	½	2	1	2	½	...	...	...	...	½	...	1	½	1	½	3	½	...	...	1	½
University of Arizona	1	...	1	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1	...	1	...	...	...	...	...	...	...	1	...	2	...	1	...	...	...	...	...
University of Arkansas	1	½	1	½	1	½	1	½	...	...	½	...	½	...	...	...	4	½	2	½	2	½	2	½	2	½	2	½	½	...	½	...	2½	½	1	...	3	1	...	...	1	½
University of California	1	...	1	...	1	...	1	...	...	...	...	...	...	...	...	...	3	½	2	½	1	...	3	½	3	½	...	...	...	...	½	...	...	...	2	1	3	1	...	...	...	...
Colorado Agricultural College	1	...	1	...	1	...	1	...	...	...	1	...	...	...	...	...	2	...	1	...	...	...	2	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...
Connecticut Agricultural College[2]	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Delaware College	1	...	1	...	1	...	1	...	...	...	...	...	½	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	(3)	...	...	...
University of Florida	1	...	1	...	1	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	(4)	...	...	...
Georgia State College of Agriculture	1	...	1	...	1	...	1	...	...	...	...	...	...	...	...	...	3	1	1	½	1½	1	5½	½	...	...	...	...	½	...	...	...	2	½	...	...	...	...	...	...	...	...
College of Agriculture and Mechanic Arts of the Territory of Hawaii	...	...	...	...	...	...	...	...	...	...	...	...	...	...	(3)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	(3)	...	...	...
University of Idaho	1	...	1	...	1	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	(4)	...	...	...
University of Illinois	1	...	1	...	1	½	1	½	...	...	1	½	1	½	...	...	2	1	1	½	1	½	2	1	2	1	...	...	½	...	1	½	1	...	...	...	2	1	...	...	...	...
Purdue University (Ind.)	1	...	1	...	1	...	1	...	1	...	...	...	...	...	...	...	1	½	1	½	1	½	2	½	1	½	...	...	...	...	...	...	1	½	...	...	...	...	...	...	...	...
Iowa State College of Agriculture and Mechanic Arts	1	½	1	½	1	½	1	½	...	...	½	...	1	½	...	...	2	½	2	½	2	½	4	½	2	½	...	...	½	...	½	...	1½	½	1	½	...	...	...	...	1	½
Kansas State Agricultural College	1	...	1	...	1	...	1	...	...	...	1½	½	½	...	...	...	4	½	1	½	...	...	3	½	2	½	2	½	½	...	½	...	1	½	1	½	1	...	...	...	2½	½

[1] Domestic art sometimes is included.
[2] The unit credit system is not employed.
[3] Units to be determined.
[4] Additional units may be offered for subjects commonly taught in high schools.

TABLE 6.—*Maximum and minimum entrance credit allowed for the various high-school subjects*—Continued.

Institutions.	History and social science.															
	Greek and Roman history.		Medieval and modern history.		English history.		American history.		General history.		Economics and sociology.		Civics.		Non-specified social science.	
	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.
University of Kentucky	1	...	1	...	1	...	1	...	...	...	½	...	½	...	...	...
Louisiana State University and Agricultural and Mechanical College	1	...	1	...	1	...	1	...	...	...	...	...	1	½	...	...
University of Maine	1	...	1	...	1	...	1	...	...	...	...	...	...	...	...	...
Maryland State College of Agriculture	1	...	1	...	1	...	1	...	1	...	...	...	...	...	...	...
Massachusetts Agricultural College	1	1	1	1	1	1	1	1	1	1	...	...	...	...	...	...
Michigan Agricultural College	1	...	1	...	1	...	1	...	...	...	...	...	...	...	...	...
University of Minnesota	1	...	1	...	1½	½	1	½	...	...	½	...	1	½	...	...
Mississippi Agricultural and Mechanical College	1	...	(2)	...	(2)	...	(2)	...	...	...	...	...	...	...	...	...
University of Missouri	1	...	1	...	1	½	1	½	2	...	½	½	½	½	...	...
Montana State College of Agriculture and Mechanic Arts	...	...	...	...	...	...	...	...	...	...	...	...	...	...	(2)	1
University of Nebraska	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	1
University of Nevada	1	...	1	...	1	...	1	...	...	...	1	...	...	...	...	...
New Hampshire College of Agriculture and Mechanic Arts	1	...	1	...	1	...	1	...	...	...	½	...	...	...	...	...
Rutgers College (N. J.)	1	...	1	...	1	...	1	...	...	...	...	...	...	...	...	...
New Mexico College of Agriculture and Mechanic Arts	...	...	...	...	...	...	...	...	...	...	...	...	...	...	(2)	...

Institutions.	Vocational subjects.																												Normal training.	
	Agriculture.		Drawing, art and designing.		Drawing, mechanical.		Manual training or shop work.		Domestic science.		Domestic art.		Commercial law.		Commercial geography.		Bookkeeping and business arithmetic.		Stenography and typewriting.		Music.		Non-specified vocational subjects.		Pedagogy, psychology, etc.	
	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.
University of Kentucky	1	...	1	½	...	...	1	½	1½	...	...	...	...	1	½	1	½	...	...	...	...	...	...	½	...	...
Louisiana State University and Agricultural and Mechanical College	...	...	1	½	1	½	3	1	...	...	...	...	...	...	1	½	1	½	1	½	...	...	...	...	...	...
University of Maine	...	...	...	...	2	½	3	½	...	...	...	...	...	...	...	...	...	...	...	...	...	...	(1)	...	...	...
Maryland State College of Agriculture	3	½	1	½	1	½	1	½	...	...	...	...	...	...	...	...	½	...	...	...	...	...	...	...	...	...
Massachusetts Agricultural College	1	½	½	½	...	...	1	½	...	...	...	...	...	...	½	½	...	...	...	...	...	...	...	...	...	...
Michigan Agricultural College	3	1	1	...	...	...	2	1	2	1	2	1	...	...	...	...	1	½	1	½	...	...	...	...	...	...
University of Minnesota	4	1	3	1	2	...	2	...	2	...	2	...	½	...	1	½	2½	½	2	...	...	...	...	...	3	1
Mississippi Agricultural and Mechanical College	(2)	...	...	...	...	...	...	...	...	...	...	...	½	½	...	...	1½	½	1	...	...	...	...	...	...	...
University of Missouri	2	1	2	1	...	...	2	1	1	...	1	...	...	...	½	...	1	½	...	...	1½	1	...	...	2	2
Montana State College of Agriculture and Mechanic Arts	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	(2)	...	...	...
University of Nebraska	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	...	...	...
University of Nevada	3	½	3	½	...	...	6	½	3	½	...	...	...	...	...	...	3	½	3	1	3	½	...	...	...	...
New Hampshire College of Agriculture and Mechanic Arts	¼	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Rutgers College (N. J.)	...	...	½	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
New Mexico College of Agriculture and Mechanic Arts	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	(2)	...	...	...

Cornell University (N. Y.)	1	½	1	½	1	½	1	½									4	½	1	½			1	1	(2)		(2)						1	½					(1)			
North Carolina College of Agriculture and Engineering	1	1	1	1	1	1	1	1					½	½			1	½	½	½	½	½	1	½									½	½								
North Dakota Agricultural College																																							(2)			
Ohio State University	1	1	1	1	1	½	1	1	1	1							3	½	(2)				(2)		(2)		(2)		(2)		(2)		(2)		(2)							
Oklahoma Agricultural and Mechanical College															(2)																								(2)			
Oregon State Agricultural College															(2)																								(2)			
Pennsylvania State College	1	1	1	1	1	1	1	1	1	1							1	1	½	½	1	½	1	½																		
University of Porto Rico															(2)																								(2)			
Rhode Island State College	1		1		1		1										2	1	1	1	1		2	1	2	1																
Clemson Agricultural College (S. C.)	1		1		1		1										2	1	1	½	1	½	1	½							1	½										
South Dakota State College of Agriculture and Mechanic Arts	1		1		1		1						½	½			1		½				1		½		½				½		½									
University of Tennessee	1		1		1		1						½				2	1	2	1			2	1	2	1			½		½		1		1		3	1				
Agricultural and Mechanical College of Texas	1		1		1		1	½					½				4	1	1	½			1	½									½		1	½						
Agricultural College of Utah															(2)																								(2)			
University of Vermont and State Agricultural College	1		1		1		1						1	½			2	½	½		1	½	1	½	1	½							1	½	½							
Virginia Agricultural and Mechanical College and Polytechnic Institute	1		1		1		1	½					½				2	½	2	1			2	1															(1)			
State College of Washington	1		1		1		1				½						2	½	2	½			2	½	1	½	1	½					2		2	1	2					
West Virginia University	1		1		1		1										3	1	2	1	2	1	2	1	3	1							2	1	1							
University of Wisconsin	1		1		1		1		1		½		1	½			4	1	2	1			4	1	2	1	2	1	½		½		2½	½	2	1			(1)			
University of Wyoming	1		1		1	½	1	½			1	½	½				1						1		2								2		3	1			(1)		1	½

[1] Additional units may be offered for subjects commonly taught in high schools.

[2] Units to be determined.

TABLE 7.—*Frequency of occurrence of the various high-school subjects accepted for admission.*

Subjects.	Institutions accepting.	Subjects.	Institutions accepting.
English	49	Greek and Roman history	40
Latin	40	Medieval and modern history	40
Greek	40	English history	40
French	40	American history	40
German	40	General history	7
Spanish	38	Economics and sociology	13
Other languages	5	Civics	18
Algebra	42	Agriculture	35
Plane geometry	42	Drawing, art, and designing	33
Solid geometry	38	Drawing, mechanical	18
Trigonometry	31	Manual training or shopwork	34
Advanced algebra	27	Domestic science [1]	24
Physiography and geology	37	Domestic art	10
Physics	42	Commercial law	10
Chemistry	39	Commercial geography	16
Botany	41	Bookkeeping and business arithmetic	27
Zoology	38	Stenography and typewriting	19
Physiology	31	Music	10
General biology	13	Pedagogy, psychology, etc	9
General science	8		

[1] Domestic art sometimes is included.

TABLE 8.—*The practice of the institutions in awarding collegiate credit.*

Institutions.	Terms in college session.	Unit of collegiate credit: S. H. = Semester-hour. T. H. = Term-hour. Y. H. = Year-hour.	Duration of a one-credit recitation period.	Duration of a one-credit laboratory period.	Credit hours per week required.[1]	
					Minimum.	Maximum.
			Minutes.	*Hours.*		
Alabama Polytechnic Institute	3	T. H.	60	1	(2)	(2)
University of Arizona	2	S. H.	50	3	.....	.....
University of Arkansas	2	S. H.	50	2 -3	.....	.....
University of California	2	S. H.	50	2 -3	.....	19
Colorado Agricultural College	2	S. H.	50	2	(2)	.....
Connecticut Agricultural College	2	S. H.	50	2	(2)	.....
Delaware College	2	S. H.	50	2	.....	20
University of Florida	2	S. H.	50	2	16	23
Georgia State College of Agriculture	3	Y. H.	50	2	.....	.....
College of Agriculture and Mechanic Arts of the Territory of Hawaii	2	S. H.	50	2 -3	(2)	.....
University of Idaho	2	S. H.	50	3	12	19
University of Illinois	2	S. H.	50	2 -3	15	18
Purdue University (Ind.)	2	S. H.	50	2½	(2)	.....
Iowa State College of Agriculture and Mechanic Arts	2	S. H.	50	3	.....	.....
Kansas State Agricultural College	2	S. H.	50	3	(2)	.....
University of Kentucky	2	S. H.	50	2	12	18
Louisiana State University and Agricultural and Mechanical College	2	S. H.	50	3	(2)	.....
University of Maine	2	S. H.	50	2 -3	17	22
Maryland State College of Agriculture	3	T. H.	50	2	(2)	.....
Massachusetts Agricultural College	3	T. H.	50	2	16	21
Michigan Agricultural College	3	T. H.	50	2 -3	18	23
University of Minnesota	2	S. H.	50	2 -3	15	18
Mississippi Agricultural and Mechanical College	3	T. H.	50	2	20	.....
University of Missouri	2	S. H.	50	2	12	18
Montana State College of Agriculture and Mechanic Arts	2	S. H.	60	2 -2½	12	19
University of Nebraska	2	S. H.	50	3	12	18
University of Nevada	2	S. H.	50	2½	10	18
New Hampshire College of Agriculture	2	S. H.	50	2½	(2)	(4)
Rutgers College (N. J.)	2	S. H.	55	2 -3	(2)	.....
New Mexico College of Agriculture and Mechanic Arts	2	S. H.	50	2	18	.....
Cornell University (N. Y.)	2	S. H.	50	2½-3	12	18
North Carolina College of Agriculture and Engineering	2	S. H.	50	2	(2)	.....
North Dakota Agricultural College	3	T. H.	50	2	15	21
Ohio State University	2	S. H.	55	3	.....	.....
Oklahoma Agricultural and Mechanical College	2	S. H.	50	3	12	20
Oregon State Agricultural College	2	S. H.	50	2 -3	13	21
Pennsylvania State College	2	S. H.	50	2 -2½	18	21
University of Porto Rico	2	S. H.	50	2	.....	.....
Rhode Island State College	2	S. H.	50	2	.....	.....
Clemson Agricultural College (S. C.)	3	T. H.	50	1	.....	.....
South Dakota State College of Agriculture and Mechanic Arts	2	S. H.	50	2 -2½	14	20
University of Tennessee	2	S. H.	50	2	12	18
Agricultural and Mechanical College of Texas	2	S. H.	50	2	16	24
Agricultural College of Utah	3	S. H.	50	2½-3	15	15
University of Vermont and State Agricultural College	2	S. H.	50	2	.....	.....
Virginia Agricultural and Mechanical College and Polytechnic Institute	3	T. H.	50	1	(2)	.....
State College of Washington	2	S. H.	50	2	15	20
West Virginia University	2	S. H.	50	2 -3	15	20
University of Wisconsin	2	S. H.	50	2	16	.....
University of Wyoming	2	S. H.	50	3	14	18

[1] In most cases the minimum and maximum requirements per week include the work in military and physical drill, but this point is not always stated definitely.
[2] Minimum requirements are according to term schedule.
[3] Not more than five actual hours per week in excess of the scheduled number may be carried without special permission.
[4] Not more than two hours in excess of the term schedule.

TABLE 9.—*Requirements for graduation*—PART I: *Languages, mathematics, political and social science, education.*

[The use of italics indicates that a limited number of courses may be substituted for the one listed.]

Institutions.	Languages.																Mathematics				Political and social science.																All nontechnical subjects.			
	Foreign language.				English composition and rhetoric.				English literature.[1]				Argumentation and public speaking.								History and civil government.				Economics and sociology (general).				Rural economics and rural sociology.				Psychology and education.							
	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.
Alabama Polytechnic Institute				7½	4¾				5½		*6*			6			10				4	2¾															24	8¾	6	7½
University of Arizona	4	4			3						4	4	3				5											6									15	4	4	10
University of Arkansas					6		6											4														6					6	4	6	6
University of California		6			6												6										3				3						12	6	6	
Colorado Agricultural College					6				4					5			5											2				2					15	5		4
Connecticut Agricultural College					[2]6					[2]4													6				6									6	4	12	
Delaware College	6	6			6					4							4				1							6									17	10		6
University of Florida					6				1			[3]3					4											*6*				2					11			11
Georgia State College of Agriculture					6					6							6					3				3											12	12		
College of Agriculture and Mechanic Arts of the Territory of Hawaii	6	6			6					6							6											3									18	12		3
University of Idaho					2	4			4																												6	4		
University of Illinois					6					4													*2*				*3*		2		*2*	*2*					8	4	5	4
Purdue University (Ind.)			6	6	6					6							6						6					6									12	6	12	12
Iowa State College of Agriculture and Mechanic Arts						6						[2]2				2	3														3	2					3	6	3	6
Kansas State Agricultural College					6				[2]5		[2]1																										11		1	
University of Kentucky					6					4																					3						6	4	3	
Louisiana State University and Agricultural and Mechanical College					[2]6												6																				12			
University of Maine	5				4		2				2		2					5																			11	5	4	
Maryland State College of Agriculture	6	6	3½	2	10	4								2	2		3½				*6*		4				2	8							2¾		25½	12	14	10
Massachusetts Agricultural College	6	6							6	4	3½		2				10						*5*			5½	3½					3½					24	15½	8¾	3½
Michigan Agricultural College					6									4			4¾									2			1½								14	4		
University of Minnesota					6									6			3				3	3					3				3						12	15		
Mississippi Agricultural and Mechanical College					6	4				2							6½	6			6			2				2¾									18¾	12	2½	2
University of Missouri					6																							5									6		5	

| | | |

TABLE 9.—*Requirements for graduation*—PART II: *Agronomy, horticulture.*

[The use of italics indicates that a limited number of courses may be substituted for the one listed.]

Institutions.	Agronomy and soils.																				Horticulture.																			
	Field and forage crops.[1]				Soils (general).				Soil fertility and management (including fertilizers).				Farm management (including farm accounts).				General agronomy (including thesis and seminar).				Plant propagation.				Pomology.				Olericulture.				Landscape or ornamental gardening.				General horticulture.			
	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.
Alabama Polytechnic Institute	...	4	...	2⅔	...	...	...	10	...	...	...	...	...	1	...	2	...	...	...	4	...	2⅔	...	...	...	...	⅔	...	...	...	4	...	...	...	1½	...	...	...	...	...
University of Arizona	3	...	...	...	...	4½	...	...	...	4½	...	...	...	...	...	3½	...	...	...	3	...	...	4	...	...	...	...	...	...	...	3	...	...	...	...	...	...	...	...	...
University of Arkansas	...	...	6	...	...	6	...	...	...	...	...	6	...	...	...	6	...	...	...	4	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
University of California	...	...	6½	...	...	4½	...	...	...	...	...	...	...	•	...	3	...	...	...	{1 5	} ...	4½	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Colorado Agricultural College	...	3	3	3	...	3	2	...	...	...	...	...	...	...	...	3	...	...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Connecticut Agricultural College	3	...	6	4	...	3	...	...	...	...	...	4	...	3	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Delaware College	...	...	6	3	...	...	...	3	...	...	6	...	...	...	...	3	...	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	...	...	...
University of Florida	...	...	6	...	...	...	6	...	...	3	...	3	...	...	...	6	4	...	...	...	4	...	...	...	...	...	...	...	...	4	...	...	...	...	...	2	...	...	...	...
Georgia State College of Agriculture	4	...	6	6	...	3	4	6	...	3	...	...	...	...	...	6	...	...	...	...	2	...	...	...	2	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...
College of Agriculture and Mechanic Arts of the Territory of Hawaii	...	...	...	9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
University of Idaho	5	...	4	...	...	5	2	...	...	...	3	...	...	...	3	...	...	...	...	6	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	...	...
University of Illinois	5	...	8	...	...	...	7	...	...	...	7	3	...	...	...	3	...	...	...	7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6	...	...	...
Purdue University (Ind.)	...	3½	5	3½	...	3½	5	3½	...	3½	3½	...	...	...	...	6	...	...	...	5	...	...	...	...	...	3½	...	...	...	3½	...	...	...	...	...	...	...	...	...	...
Iowa State College of Agriculture and Mechanic Arts	6	6	...	6	...	4	...	...	...	...	4	2	...	...	3	...	...	...	1½	4½	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	3	...	...	...
Kansas State Agricultural College	...	7	...	5	...	...	4½	...	...	...	3½	...	...	...	...	6	...	...	...	...	3	...	...	...	...	2½	...	...	...	...	...	...	...	...	...	...	...	...	...	...
University of Kentucky	...	{3 4	4 2	} 8	...	...	4	4	...	...	5	8	...	...	3	3	...	...	...	...	...	...	...	...	...	...	3	...	...	...	...	...	...	...	...	...	3	...	...	...
Louisiana State University and Agricultural and Mechanical College	...	6	...	8	...	...	5	6	...	...	4	...	...	...	...	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6	...	...	...
University of Maine	2	3	6	2	...	3½	...	...	...	...	...	2	...	...	...	5½	...	...	...	...	...	...	...	...	...	3½	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Maryland State College of Agriculture	2⅔	2	2	...	...	5⅓	1⅓	2⅔	...	2⅔	...	...	...	...	...	5⅓	...	...	...	1⅓	...	...	...	...	...	4	...	...	...	4⅔	...	...	...	2⅔	...	...	...	...	...	...
Massachusetts Agricultural College	⅔	...	6⅔	...	...	3½	...	3½	...	...	...	3½	...	...	...	3½	...	...	...	...	...	...	...	...	⅔	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Michigan Agricultural College	2	1⅓	...	6⅔	...	1⅓	...	6⅔	...	2	...	3⅓	...	...	2	...	...	...	...	...	...	1⅓	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...
University of Minnesota	3	...	3½	3	...	...	3	...	...	...	3	...	...	...	3	6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	...	...

Mississippi Agricultural and Mechanical College	3½		3½	2¾	3½						4	2¾		1½		2¾				5		2¾																2¾	
University of Missouri		5		14			5													3															3				
Montana State College of Agriculture and Mechanic Arts		8¾		2½			5½	2			3					6				4	3¼															4		
University of Nebraska		4	6			4					4	6			3										2														
University of Nevada		4¼	4½													5½																						3¼	
New Hampshire College of Agriculture and Mechanic Arts			3¼				3¼					3				3¼							3¼		3¼		4¼		3¼	3½				[2] 5½				3¼	1¼
Rutgers College (N. J.)		3½				3½					2	14								5			3½				4½												
New Mexico College of Agriculture and Mechanic Arts		6	2½				3½				3½					6	2			8½	2½						3			3				2					
Cornell University (N. Y.)			7½	3				3½			3¼	4½			2¼										3¼						2¼							9	
North Carolina College of Agriculture and Engineering			6	12			6					3				3						3					6				3								
North Dakota Agricultural College	2	3½				3½				3½	5½					3⅓				4	2¾																	2¾	
Ohio State University		4	4	7		6										4			2	2																			4
Oklahoma Agricultural and Mechanical College		7	3	4			4				6					6				6					3				3										
Oregon State Agricultural College	3½		5	8		8	5					3		2		3									3					1½				1½					
Pennsylvania State College			6	3		4	5				3					6				2		3										3							
University of Porto Rico		6	6	12		4									3		6			3															6	6	8	
Rhode Island State College		2	4				5½								2						2				2		2		2					3					
Clemson Agricultural College (S. C.)			2	6			4						1½			4¾											2	2			2	2							
South Dakota State College of Agriculture and Mechanic Arts	5		5				6				6																										2		
University of Tennessee			6	6						3		6													3														
Agricultural and Mechanical College of Texas	3		5				{3 5}	3				3				{6 5}														3							4		
Agricultural College of Utah	6½					6½	2¼													2½																			
University of Vermont and State Agricultural College			3			6									3	3											3	3		3									
Virginia Agricultural and Mechanical College and Polytechnic Institute			5				4							2		2									2½												2		
State College of Washington	5		3			4				3						3									2														
West Virginia University		4½	7							5	2		1		3	3	1			2					3½				3½										
University of Wisconsin	2½			8		5						5								1					3														
University of Wyoming	8						4				4					2															2								
Frequency of occurence	20	22	36	27	1	24	26	12	0	10	21	19	2	5	11	36	4	0	2	23	9	7	3	0	3	15	8	3	4	8	6	4	0	3	3	1	5	10	4	2
Median requirement[3]	9½				5				4½				5½				4				3				3				3				2				3½			

[1] Includes judging and testing grain. [2] Partly floriculture. [3] Based only upon the institutions listing requirements in the subject.

TABLE 9.—*Requirements for graduation*—PART III: *Agricultural engineering, genetics.*

[The use of italics indicates that a limited number of courses may be substituted for the one listed.]

Institutions.	Agricultural engineering.																												Genetics.											
	Farm mechanics (shop work).				Farm machinery (including motors and engines).				Rural architecture.				Irrigation and drainage.				Surveying, platting, etc.				Drawing.				General agricultural engineering.				Animal breeding.				Plant breeding and crop improvement.				General genetics.			
	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.
Alabama Polytechnic Institute	6							⅔							2		3½				5																			
University of Arizona																					3														3					
University of Arkansas	3																	1				2							6											
University of California																		3																				4½		
Colorado Agricultural College	4						6		3						3		5																			3			1	
Connecticut Agricultural College	3					3																						3											3	
Delaware College								3																												2				3
University of Florida					4																							3												
Georgia State College of Agriculture															2										6														6	
College of Agriculture and Mechanic Arts of the Territory of Hawaii																		5			5															3½				
University of Idaho	1½																		2½																	4				
University of Illinois		3½					4																													2		2		
Purdue University (Ind.)		4																			3																		3	
Iowa State College of Agriculture and Mechanic Arts	3					3												3																	5½					
Kansas State Agricultural College								7																											4					
University of Kentucky			3				3																					4												
Louisiana State University and Agricultural and Mechanical College					8		5								5																									
University of Maine																					3							7							2					
Maryland State College of Agriculture			1½					2¾				2				1½			2¾		1½		1½																	
Massachusetts Agricultural College																																				8				
Michigan Agricultural College	4																	2																						
University of Minnesota								5				3½																			1½					3½				
Mississippi Agricultural and Mechanical College	1½				1½		2½									3¾					2		3					3								3				3
																																				2¾				

| | | |

TABLE 9.—*Requirements for graduation*—PART IV: *Animal husbandry, forestry, general agriculture, all technical subjects.*

[The use of italics indicates that a limited number of courses may be substituted for the one listed.]

Institutions.	Animal husbandry.																								Forestry.				General agriculture (including farm practice.)				Total technical subjects.			
	Breeds and types of livestock (including stock judging.)				Feeding and management of livestock.				Dairy husbandry and dairy industries.				Poultry husbandry.				Veterinary science and practice.				General animal husbandry.															
	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.
Alabama Polytechnic Institute	...	2	2½	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	8	...	...	...	...	...	...	...	...	2½	...	...	...	...	14½	9½	20½	22
University of Arizona	...	3½	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	...	...	...	...	...	...	...	3	6	12½	10	12½
University of Arkansas	3	3	...	...	...	...	3	6	...	...	...	...	...	...	6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	15	12	15	22
University of California	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	16	11	...	16½	12½	20
Colorado Agricultural College	2	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	14	11	14	10
Connecticut Agricultural College	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9	9	9	14
Delaware College	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	...	...	...	...	...	...	4	...	...	...	4	8	12	20
University of Florida	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	17	7	12	14
Georgia State College of Agriculture	2	6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	18	12	12	24
College of Agriculture and Mechanic Arts of the Territory of Hawaii	...	...	...	3½	...	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10	...	5	5	10	18½
University of Idaho	3	3	...	...	...	...	3	...	2	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	13½	14	17½	10
University of Illinois	3	...	...	...	...	3	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	16	8½	26	15
Purdue University (Ind.)	6	...	...	...	...	4½	3	...	...	3½	...	...	3½	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	12½	20½	19½	18
Iowa State College of Agriculture and Mechanic Arts	5	8	...	...	...	...	...	3	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	1	...	...	...	23	24	14	17½
Kansas State Agricultural College	5½	...	...	...	...	...	3	...	...	3½	...	3½	...	2½	...	...	...	6	...	...	...	...	...	2	...	...	...	...	...	...	...	3½	8½	21½	15	27
University of Kentucky	6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6	13	27	15
Louisiana State University and Agricultural and Mechanical College	8	...	...	...	...	...	6	...	...	...	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	16	12	30	18
University of Maine	3	1	...	...	...	2	2	...	...	...	4	...	...	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8	18	14	16½
Maryland State College of Agriculture	2	...	2½	...	3½	...	2½	...	...	...	...	2½	...	...	...	2	...	...	...	3½	...	...	...	...	...	...	...	2½	...	...	...	...	9½	21½	14	34
Massachusetts Agricultural College	½	...	...	2	...	...	...	...	...	...	...	...	½	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2½	3½	6½	12
Michigan Agricultural College	2	...	2	...	...	...	3½	...	...	2	...	...	...	...	1½	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	10	12	10	20
University of Minnesota	3	...	...	...	...	...	6	3	3	...	...	...	...	...	...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	12	3	24½	24½
Mississippi Agricultural and Mechanical College	...	3½	...	...	...	...	3½	...	...	2½	4	...	½	...	2½	...	2½	...	3½	...	...	...	...	...	...	...	...	2	3½	...	...	...	18	10	26½	21½
University of Missouri	3	...	...	...	...	...	3	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6	8	11	17

Montana State College of Agriculture and Mechanic Arts	3½		4½						3½											4													10	12¾	12¾	29
University of Nebraska	4								5																								15	10	13	10
University of Nevada	3	4½				3				3½										3									3				8½	15	19¾	17
New Hampshire College of Agriculture and Mechanic Arts		3								3½				3													3½						4½	22¼	25½	13¾
Rutgers College (N. J.)			3½							2½				2½																			5	12	13½	19
New Mexico College of Agriculture and Mechanic Arts	5½						3			3½									3														13½	21	21½	17½
Cornell University (N. Y.)																								5½										3½	22	23¾
North Carolina College of Agriculture and Engineering			3				3			3					3			5															4	13	30	27
North Dakota Agricultural College	9½					2				2								9½														[2]2¾	16	27½	8¾	13½
Ohio State University			4								4																		1				8½	10	22	17
Oklahoma Agricultural and Mechanical College	3½	4					3		3						2																	3½	12½	14	29	22½
Oregon State Agricultural College	3				3			3		3				2																			11½	21	17	19
Pennsylvania State College	3			[2]					2			4																			[1]6		5	9	25½	23
University of Porto Rico		3	3				3														6												24	22	29	15
Rhode Island State College	4							3			3				1				3													[3]	11	5	26½	12
Clemson Agricultural College (S. C.)			3¾					2			4¾					3			5½										4				13½	5	24½	22¾
South Dakota State College of Agriculture and Mechanic Arts	7								3									2															15	4	17	3
University of Tennessee		3	3			2	3			3									6										2				2	17	18	18
Agricultural and Mechanical College of Texas	4	3						4	3					2				6															10	18	24	25
Agricultural College of Utah											5½																						6½	6½	5¾	2½
University of Vermont and State Agricultural College		2	3			3			2		3	3				6			6	3							2						4	16	27	24
Virginia Agricultural and Mechanical College and Polytechnic Institute		7						6			2	6						4		)													10	26½	15	27
State College of Washington	5						3			3					3																		10	16	11	3
West Virginia University	3½					3				3½				3½																			9	23	12	11
University of Wisconsin	2½						2		2½																								10	8	2	20
University of Wyoming		6					5											3															8	21	15	4
Frequency of occurrence	32	18	11	3	2	8	19	9	12	16	10	5	3	7	7	3	1	8	8	5	1	1	1	2	2	2	0	3	8	0	3	6	48	50	50	50
Median requirement [4]	4¾				3				3½				2½				5				4				2				3½				60½			

[1] Represents credit for summer practice.
[2] This represents credit for elective agricultural work.
[3] Methods of investigation in agriculture.
[4] Based only upon the institutions listing requirements in the subject.

TABLE 9.—*Requirements for graduation*—PART V: *Military training, physical training, biology.*

[The use of italics indicates that a limited number of courses may be substituted for the one listed.]

Institutions.	Military science and tactics.				Personal hygiene and human physiology.				Physical training (gymnasium).				Biology. General botany.[1]				Biology. Agricultural or economic botany (including plant pathology).				Biology. Bacteriology.				Biology. Zoology.				Biology. Entomology.				Biology. General biology.			
	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.
Alabama Polytechnic Institute	3	3	5	2	...	...	...	...	...	...	...	...	...	8	5½	...	...	...	...	...	...	...	2¾	...	...	5½	...	...	...	...	...	5½	...	...	...	...
University of Arizona	3	3	...	...	...	...	...	...	...	...	...	...	...	5	...	...	...	...	...	...	...	...	4½	...	...	...	...	...	...	...	...	...	...	5	...	...
University of Arkansas	4	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3½	...	5	...	...	...	...	...	...	...	3½	...	...	6	...	...	...
University of California	3	3	...	...	2	...	...	...	2	2	...	...	8	...	...	...	...	...	{5 {4	...	6	...	...	4½	...	4	...	...	...	...	...	...	...	...	...	...
Colorado Agricultural College	2	2	2	...	3	...	...	...	...	...	...	...	5	...	5	...	2	...	...	3	...	...	...	2	...	4½	...	1	...	...	...	...	...	...	...	...
Connecticut Agricultural College	3	3	3	3	...	...	...	...	2	...	...	...	4	...	3	...	...	...	...	3	...	...	4	3	4	...	...	...	...	...	...	...	...	...	...	...
Delaware College	3	3	3	3	...	...	...	...	1	1	...	...	6	...	...	...	...	...	...	...	...	...	6	...	...	...	6	...	...	...	...	...	...	...	...	...
University of Florida	2	2	...	...	...	...	...	...	...	...	...	...	6	3	...	...	...	...	3	...	...	...	6	...	...	6	...	...	...	...	3	...	...	...	...	...
Georgia State College of Agriculture	4	2	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6	...	...	...	...	3	...	...	...	...	...	...	...	3	...	...	...	...	...
College of Agriculture and Mechanic Arts of the Territory of Hawaii	...	...	...	...	...	...	...	...	...	...	...	...	7	3½	...	...	...	...	...	...	...	...	...	4½	...	3½	...	...	...	...	7	...	...	...	...	...
University of Idaho	4	4	...	...	...	...	...	...	...	...	...	...	8	...	5	...	...	...	...	5	...	5	...	...	...	5	...	...	...	...	4	2½	...	...	...	...
University of Illinois	3	2	...	...	...	...	...	...	2	...	...	...	...	7	...	...	...	...	3	...	...	...	...	[2]6	...	...	...	...	...	...	...	7	...	...	...	...
Purdue University (Ind.)	3	3	...	...	...	...	...	...	...	...	...	...	...	...	5	...	3½	...	5	...	...	...	...	10	...	...	...	...	3½	...	...	...	7	...	...	...
Iowa State College of Agriculture and Mechanic Arts	2	2	...	...	1	...	...	...	1	...	...	...	2	...	4	...	...	...	...	3	...	...	9	...	...	...	7	...	...	...	4	...	...	...	...	...
Kansas State Agricultural College	3	3	...	...	...	...	...	...	...	...	...	...	6	...	...	...	...	4	...	...	...	...	[3]4	...	...	6	...	...	...	...	3½	...	...	...	...	...
University of Kentucky	3	3	...	...	...	...	...	...	2	2	...	...	8	...	...	...	...	...	...	...	...	...	4	...	...	4	...	...	...	4	...	...	...	...	...	...
Louisiana State University and Agricultural and Mechanical College	5	5	...	...	...	...	...	...	...	...	...	...	8	...	...	...	...	...	...	...	...	...	...	...	...	8	...	...	...	...	...	...	...	...	...	...
University of Maine	3	3	...	...	...	...	...	...	3	...	...	...	4	...	5	...	...	...	5	...	...	...	5	...	4	...	...	...	...	4	...	...	...	2	...	...
Maryland State College of Agriculture	4	4	2	2	...	...	...	...	...	...	...	...	3½	7½	...	2	...	...	2¾	...	...	...	5½	...	5½	...	...	...	...	2¾	...	...	...	...	...	...
Massachusetts Agricultural College	3½	3½	3½	...	¾	...	...	...	1	1	1	...	2	4	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...
Michigan Agricultural College	3	3	3	...	...	...	...	...	...	...	...	...	7½	...	...	...	...	...	...	...	...	4	...	...	...	6¾	...	...	...	3½	...	...	...	...	...	...
University of Minnesota	2	2	...	...	1	...	...	...	...	...	...	...	8	...	...	...	...	...	3½	4	...	4	...	...	...	8	...	...	...	...	3½	...	...	...	...	...
Mississippi Agricultural and Mechanical College	2	4¾	2	2	¾	...	...	...	2	...	...	...	...	5½	...	...	2¾	2¾	...	...	...	...	...	2¾	...	3½	...	...	...	...	5½	2¾	...	...	...	...
University of Missouri	2	2	...	...	...	...	...	...	...	...	...	...	5	...	5	...	...	...	...	...	...	3	...	...	5	3½	...	...	...	3	...	...	...	...	...	...

Montana State College of Agriculture and Mechanic Arts	2½	2½											4½		4¾					4¼			5¾			3¼				4½					3	
University of Nebraska	3	3											*10*							*6*						9						*6*				
University of Nevada	2	2											4½		3	3¼									4½						3¼					
New Hampshire College of Agriculture and Mechanic Arts	4	4											7		3½					3½			3		6½					3¼					
Rutgers College (N. J.)	3	3			1									7					2½				3½	[3]7			6				3½				
New Mexico College of Agriculture and Mechanic Arts	3	3				4							7		3½				3½			3½				3½					5½				
Cornell University (N. Y.)	3	3												11	2½				4½	3½			5½									3¼	6½		
North Carolina College of Agriculture and Engineering	4	4											6	5											6	2					3				
North Dakota Agricultural College	4	4											8¾		2¾				2¾					[4]6		6					2¾				
Ohio State University	2	2			1				2					9											6					3	3				
Oklahoma Agricultural and Mechanical College	3	3							3				8	3								4				4					4				
Oregon State Agricultural College	4	4	6		½				2	2								7½		4		3	3			7					3				
Pennsylvania State College	3½	2½							1	1			9									3					3½				4½				
University of Porto Rico	3	3	3	3										6						8				4					4	4					
Rhode Island State College	3	3	3	3									6					3						6		8									
Clemson Agricultural College (S. C.)	3	3	5	3									2¾	2		2		2		¾				2¾		4¾				2¾	¾	1½			
South Dakota State College of Agriculture and Mechanic Arts	3	4												10													10			10					
University of Tennessee	5	5											6					3		3			3		6							3			
Agricultural and Mechanical College of Texas	4	4	2	2									8													6					6				
Agricultural College of Utah	5	5	5											*9*						3½			4½	3½								3			
University of Vermont and State Agricultural College	4	4							1	1			4	8									3			6									
Virginia Agricultural and Mechanical College and Polytechnic Institute	6	6	6	6										4	2	2			4					7			4				5				
State College of Washington	2	2							1	1				5				3				5			2										
West Virginia University	4	4											9		7								3½	3½		4½				4½	3½				
University of Wisconsin	2	2							2	2				5	4				2			5				3									
University of Wyoming	3	3	3										10			3½			3½			5													
Frequency of occurrence	49	49	17	10	9	1	0	0	16	9	1	0	33	21	17	5	4	7	15	14	1	12	20	15	10	26	6	1	2	13	19	11	3	2	1	0
Median requirement [5]	8				1				2				9				3¾				5				4½				4				5½			

[1] Includes all phases of botany, except agricultural botany, bacteriology, and plant pathology
[2] Soil biology.
[3] Microbiology.
[4] Part of the time (3½ hours) is devoted to soil biology.
[5] Based only upon the institutions listing requirements in the subject.

TABLE 9.—*Requirements for graduation*—PART VI: *Chemistry, physics, geology, total science, total elective, total all subjects.*

[The use of italic indicates that a limited number of courses may be substituted for the one listed.]

Institutions.	Chemistry.																				Physics.				Geology.				All science subjects.				Elective work.[1]				All subjects.			
	Inorganic or general chemistry.				Qualitative analysis.				Quantitative analysis.				Organic chemistry.				Agricultural chemistry.																							
	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.
Alabama Polytechnic Institute	8	...	...	...	...	6	...	...	...	...	*6*	...	...	4	...	...	...	2½	...	...	...	6	...	...	...	...	2½	...	8	32	16½	5½	...	...	...	5½	49½	53½	48½	42
University of Arizona	9	...	...	...	...	...	5½	...	...	...	...	5½	...	...	...	...	...	...	...	...	...	...	8	...	...	...	...	...	9	10	18	5½	2	8½	1	4	35	38	33	32
University of Arkansas	7	...	...	...	...	4	...	...	...	...	4½	...	...	3	...	...	...	...	3	...	...	5	...	...	...	...	...	...	13	20½	7½	3½	...	...	8	4½	38	40½	36½	36
University of California	10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6	4½	...	...	...	...	...	...	3	...	...	24	13	13½	4½	...	...	2	7	43	40½	34	31½
Colorado Agricultural College	...	10	...	...	...	...	...	...	...	...	...	...	...	...	10	...	...	...	...	...	...	10	...	...	...	...	2	...	7	24½	17	6	...	...	6	17½	41	42½	39	37½
Connecticut Agricultural College	...	8	...	...	...	...	...	...	...	...	...	...	...	...	*4*	...	...	...	...	*3*	...	...	...	...	...	3	...	...	8	11	11	9	12	13	...	9	40	40	35	35
Delaware College	6	...	...	...	...	1½	...	...	...	1½	...	...	...	6	...	...	...	...	6	...	...	8	...	...	...	...	...	...	12	17	18	...	2	2	2	6	39	41	35	35
University of Florida	...	10	...	...	...	...	3	...	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6	19	18	...	...	4	2	7	36	32	32	32
Georgia State College of Agriculture	6	...	...	...	...	6	...	...	...	...	...	...	...	...	*6*	...	...	...	...	...	...	6	...	...	...	...	...	...	6	18	12	...	...	...	12	12	40	44	38	36
College of Agriculture and Mechanic Arts of the Territory of Hawaii	6½	...	...	...	...	7	...	...	...	...	...	...	...	...	...	...	...	...	6½	...	...	6½	...	...	...	...	3½	...	13½	20	16½	4½	...	...	9½	11	36½	37	36½	37
University of Idaho	10	...	...	...	...	2½	...	...	...	2½	...	...	...	...	...	...	...	6	...	3	...	...	...	...	...	...	...	...	18	21	9	10½	...	...	13½	19	41½	43	40	39½
University Illinois	11	...	...	...	...	...	...	...	...	7	...	...	...	...	*3*	...	...	...	...	...	...	...	...	...	...	...	...	...	11	14	6	13	4	12	...	...	44	41½	37	32
Purdue University (Ind.)	9	...	...	...	...	10	...	...	...	...	...	10	...	...	...	...	...	...	3½	...	...	...	...	...	...	...	...	...	23	10	13½	20	...	...	...	...	50½	48½	45	50
Iowa State College of Agriculture and Mechanic Arts	10	...	...	...	...	...	...	...	...	...	...	...	...	4	...	...	...	4	...	...	3	...	...	...	...	3	...	...	15	11	24	3	...	...	3	16½	45	43	44	43
Kansas State Agricultural College	10	...	...	...	...	...	...	...	...	3	...	...	...	3½	...	...	...	...	...	...	...	3	...	...	...	...	...	...	16	19½	7½	...	...	...	13	11	38½	44	36½	38
University of Kentucky	11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5	...	...	...	...	...	...	...	3	...	...	19	16	4	...	...	...	2	20	36	38	36	35
Louisiana State University and Agricultural and Mechanical College	...	10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8	...	...	...	...	...	...	8	26	...	...	...	...	8	18	41	43	38	36
University of Maine	9	...	...	...	...	...	...	...	...	...	...	...	...	3	...	...	...	7	2	...	...	...	...	...	...	...	...	...	17	16	17	...	...	...	5½	18	42	42	40½	34½
Maryland State College of Agriculture	6½	3½	...	...	...	3½	...	...	...	...	...	...	...	...	2½	...	...	...	...	4	...	...	8	...	...	...	3½	...	15½	16½	22	6	...	...	...	...	54	54	52	52
Massachusetts Agricultural College	4	...	...	...	...	4	...	...	...	...	...	...	...	...	10½	...	2	...	...	...	...	4½	...	...	1½	3½	...	...	9½	18	10½	...	...	...	4	18	41	41	34½	33½
Michigan Agricultural College	3½	...	...	...	3½	...	...	...	...	...	...	...	3½	...	...	...	...	...	...	...	...	6½	...	...	...	3½	...	...	17½	24	...	...	...	...	30	20	44½	43	43	40
University of Minnesota	8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	...	...	*6*	...	...	...	...	...	...	16	21	7	4	...	...	6½	9½	43	41	38	38
Mississippi Agricultural and Mechanical College	...	12	...	...	...	...	...	...	...	...	...	...	...	...	4½	...	...	...	4½	...	5½	...	...	...	2	...	3	...	10	23½	17	5½	...	...	...	14½	51½	50	48½	45
University of Missouri	5	...	...	...	...	5	...	...	...	...	...	...	...	3	...	...	...	...	3	...	5	...	...	...	...	3	...	...	20	17	8	...	...	5	7	10	34	32	31	27
Montana State College of Agriculture and Mechanic Arts	9	...	...	...	...	...	...	...	...	...	...	...	...	5½	...	...	...	5½	...	...	5½	...	...	...	...	3	...	...	19	22	13½	4½	...	...	10	5½	40½	41½	40½	39

University of Nebraska	8													6									9		3				21	15	9	12		5	10	9	43	37	37	37
University of Nevada	4½				4½					2½				2				9				4½							18	17¾	6½	3½	6½	6½	8¾	15½	41	41½	39	38½
New Hampshire College of Agriculture and Mechanic Arts	6					6½																4		[2]2			3		19½	13½	9½	5½			4	12	39	39¾	39	37½
Rutgers College (N. J.)	7					4½					5											7						7	7	18½	20½	14					40	43½	40	41
New Mexico College of Agriculture and Mechanic Arts	9													2				5			3							4	19	14	12½	4				6	41½	42	34	32½
Cornell University (N. Y.)	6½				3½				3½									4			5	[2]5½				3½			24½	21½	12½	6¾					37¾	33¾	34½	33½
North Carolina College of Agriculture and Engineering	6					6					2					6				2		6				2			18	21	4	9				6	42	44	48	48
North Dakota Agricultural College	6				4					3½				6									6¾						18¾	15½	12	8¾				6¾	44¾	48	28¾	28¾
Ohio State University	10																	6			3				3	3			22	21	3			7	4½	20	42½	40	35½	37
Oklahoma Agricultural and Mechanical College	9					2½				5				3½															17	22	4					11	43½	41	36	35½
Oregon State Agricultural College	8																	8	2		4								19½	18	12				3	7	44½	45	41	32
Pennsylvania State College	6½					3								2				5	6			3½				3½			15½	20	14					8	42	44½	45½	37
University of Porto Rico		4																4											4	18		12			3	13	43	43	41	43
Rhode Island State College	8													4				4				5				2			14	26		6			3	16	45½	44	42½	47
Clemson Agricultural College (S. C.)		8½									3					2¾				1½		7½				¾		4	2¾	27¾	7¾	10¾					45	45	45	45
South Dakota State College of Agriculture and Mechanic Arts	15					4								3½														5	15	27½	10	5			11	24	47	45½	47	38
University of Tennessee		3				3					3				3												3		12	9	12	6					37	37	36	30
Agricultural and Mechanical College of Texas	8						3							4						3		6				3			22	13	12						42	41	40	39
Agricultural College of Utah	*12*													*3*									*8*			*3*			12	15	12½	10	4½	4½	8½	15	38	37	37½	33½
University of Vermont and State Agricultural College	10																			*5*									14	14	3	3					41	39	36	36
Virginia Agricultural and Mechanical College and Polytechnic Institute	8½	6				2½					3					6					6	8½						*5*	17	12½	24	20					57	57	57	57
State College of Washington	5				5									5								6			2				20	18					11	18½	39½	41	37	36½
West Virginia University	9															3½				5½			8						18	17	17½	7			4½	16	41	44	40	38
University of Wisconsin	10									3				2				5					6						10	23	12				15	11	38	40	34	31
University of Wyoming		10					4				4					5				5									10	15	11½	13½		2	9½	16½	37	41	39	34
Frequency of occurrence	41	11	0	0	5	18	4	0	1	8	9	2	1	20	11	2	1	17	13	7	11	20	6	1	5	16	7	5	50	50	45	33	6	11	32	40	50	50	50	50
Median requirement [3]	8¾				4				3½				3¾				4				6				3				48½				20				157			

[1] Includes only the elective work that remains after satisfying the requirements for specialization.
[2] Meteorology.
[3] Based only upon the institutions listing requirements in the subject.

TABLE 10.—*Percentage distribution of the requirements for graduation by subjects.*

Institutions.	All subjects.		Nontechnical subjects.					Science subjects.			Technical subjects			Military and physical training.			Elective.
	Collegiate credit.[1]	Semester hours.[2]	English.[3]	Foreign language.	Mathematics.	Social science.[4]	All nontechnical subjects.	"Pure science."[5]	"Applied science."[6]	All science subjects.	Agricultural subjects.[7]	Agricultural engineering.[8]	All technical subjects.	Military training.	Physical education.[9]	All military and physical training.	Elective work.
			Per cent.[11]	*Per cent.*[11]	*Per cent.*[11]	*Per cent.*[11]	*Per cent.*[11]	*Per cent.*[11]	*Per cent.*[11]	*Per cent.*[11]	*Per cent.*[11]	*Per cent.*[11]	*Per cent.*[11]	*Per cent.*[11]	*Per cent.*[11]	*Per cent.*[11]	*Per cent.*[11]
Alabama Polytechnic Institute	[10] 388	193	11.4	3.8	5.2	3.4	*23.8*	28.0	4.1	*32.1*	25.8	8.8	*34.6*	6.7	0	*6.7*	*2.9*
University of Arizona	124	138	10.1	5.6	3.8	4.4	*23.9*	27.5	3.3	*30.8*	27.5	2.2	*29.7*	4.4	0	*4.4*	*11.2*
University of Arkansas	138	151	8.2	0	2.4	3.9	*14.5*	27.6	1.9	*29.5*	38.4	4.0	*42.4*	5.3	0	*5.3*	*8.3*
University of California	130	149	4.0	4.0	4.0	4.0	*16.1*	20.8	16.1	*36.9*	30.8	2.1	32.9	4.0	4.0	8.1	[12] *6.0*
Colorado Agricultural College	160	160	9.4	0	3.0	2.6	*15.0*	30.9	3.1	*34.0*	17.5	13.1	*30.6*	3.7	1.9	*5.6*	*14.8*
Connecticut Agricultural College	150	150	6.7	0	0	8.0	*14.7*	20.0	6.0	*26.0*	21.3	6.0	*27.3*	8.0	1.3	*9.3*	[12] *22.7*
Delaware College	150	150	6.6	8.0	2.7	4.7	*22.0*	27.3	4.0	*31.3*	27.3	2.0	*29.3*	8.0	1.3	*9.3*	*8.0*
University of Florida	132	132	7.7	0	3.0	6.0	*16.7*	28.0	4.6	*32.6*	32.7	5.2	*37.9*	3.0	0	*3.0*	*9.9*
Georgia State College of Agriculture	79	158	7.6	0	3.8	3.8	*15.2*	17.1	5.7	*22.8*	36.8	5.0	*41.8*	5.1	0	*5.1*	*15.1*
College of Agriculture and Mechanic Arts of the Territory of Hawaii	136	147	8.1	8.1	4.0	2.0	*22.2*	32.8	4.4	*37.2*	19.4	6.8	*26.2*	0	0	*0*	*14.1*
University of Idaho	142	164	6.1	0	0	0	*6.1*	27.2	8.5	*35.7*	31.1	2.4	*33.5*	4.9	0	*4.9*	*19.8*
University of Illinois	130	154½	6.5	0	0	7.1	*13.6*	20.7	7.8	*28.5*	37.6	4.8	*42.4*	3.2	1.3	*4.5*	[12] *11.0*
Purdue University (Ind.)	169	194	6.2	6.2	3.1	6.1	*21.6*	25.5	8.8	*34.3*	37.4	3.6	*41.0*	3.1	0	*3.1*	*0*
Iowa State College of Agriculture and Mechanic Arts	143½	175	5.8	0	1.7	2.8	*10.3*	21.7	8.6	*30.3*	39.7	5.1	*44.8*	2.2	1.2	*3.4*	*11.1*
Kansas State Agricultural College	136	157	7.6	0	0	0	*7.6*	20.4	7.0	*27.4*	41.6	4.3	*45.9*	3.8	0	*3.8*	*15.3*
University of Kentucky	145	145	6.9	0	0	2.0	*8.9*	23.4	3.5	*26.9*	35.0	7.0	*42.0*	4.1	2.8	*6.9*	*15.2*
Louisiana State University and Agricultural and Mechanical College	136	158	3.8	0	3.8	0	*7.6*	21.5	0	*21.5*	36.8	11.3	*48.1*	6.3	0	*6.3*	[12] *16.5*
University of Maine	150	159	6.3	3.2	3.1	0	*12.6*	22.6	8.8	*31.4*	29.2	6.3	*35.5*	3.8	1.9	*5.7*	*14.8*
Maryland State College of Agriculture	318	212	11.0	5.7	1.5	10.7	*28.9*	25.3	3.0	*28.3*	31.2	5.9	*37.1*	5.7	0	*5.7*	*0*
Massachusetts Agricultural College	220	149¾	10.2	8.0	6.7	9.3	*34.2*	22.0	3.4	*25.4*	16.5	0	*16.5*	6.7	2.0	*8.7*	*15.3*
Michigan Agricultural College	240	170½	5.9	0	2.7	2.0	*10.6*	24.2	0	*24.2*	27.0	3.5	*30.5*	5.3	0	*5.3*	*29.4*
University of Minnesota	144	160	7.5	0	1.9	7.5	*16.9*	21.2	8.8	*30.0*	32.2	7.8	*40.0*	2.5	0.6	*3.1*	*10.0*
Mississippi Agricultural and Mechanical College	292	194¾	6.1	0	6.5	5.5	*18.1*	22.1	6.5	*28.6*	33.2	5.8	*39.0*	5.5	1.3	*6.8*	*7.4*
University of Missouri	124	124	4.9	0	0	4.0	*8.9*	33.9	2.4	*36.3*	33.8	0	*33.8*	3.2	0	*3.2*	*17.7*
Montana State College of Agriculture and Mechanic Arts	150	161	6.2	0	1.8	2.4	*10.6*	24.1	12.7	*36.8*	36.0	4.0	*40.0*	3.1	0	*3.1*	*9.5*
University of Nebraska	125	154	5.2	0	0	7.1	*12.3*	24.0	13.0	*37.0*	24.7	6.5	*31.2*	3.9	0	*3.9*	[12] *15.6*
University of Nevada	148	160	3.8	0	0	4.5	*8.3*	20.6	7.6	*28.2*	25.2	12.5	*37.7*	2.5	0	*2.5*	*23.2*
New Hampshire College of Agriculture and Mechanic Arts	144	155	3.9	0	2.6	4.5	*11.0*	26.6	4.4	*31.0*	35.3	7.2	*42.5*	5.2	0	*5.2*	*10.3*

Rutgers College (N. J.)	146	164½	6.1	8.5	6.0	8.5	29.1	30.8	5.8	36.6	27.1	3.0	30.1	3.7	0.6	4.3	0
New Mexico College of Agriculture and Mechanic Arts	150	150	4.0	0	0	3.4	7.4	23.7	9.3	33.0	40.3	8.7	49.0	4.0	2.7	6.7	4.0
Cornell University (N. Y.)	120	139¼	5.8	0	0	8.1	13.9	35.7	11.0	46.7	30.3	4.9	35.2	4.3	0	4.3	[12] 0
North Carolina College of Agriculture and Engineering	182	182	9.9	2.2	5.5	5.5	23.1	22.5	6.1	28.6	35.7	5.0	40.7	4.4	0	4.4	3.3
North Dakota Agricultural College	225	150	5.8	0	0.9	3.5	10.2	34.7	1.8	36.5	41.3	2.2	43.5	5.3	0	5.3	4.4
Ohio State University	142	155	2.6	0	1.9	3.9	8.4	21.9	7.7	29.6	29.7	7.4	37.1	2.6	2.0	4.6	[12] 20.3
Oklahoma Agricultural and Mechanical College	134	156	6.4	0	0	3.2	9.6	27.6	0	27.6	43.6	6.4	50.0	3.9	1.9	5.8	7.1
Oregon State Agricultural College	136	162¼	4.2	0	0	5.5	9.7	11.1	19.3	30.4	38.9	3.4	42.3	8.6	2.8	11.4	6.2
Pennsylvania State College	160	169	7.1	7.1	2.9	7.1	24.2	21.0	8.3	29.3	33.1	3.9	37.0	3.5	1.2	4.7	4.7
University of Porto Rico	170	170	3.5	0	0	7.1	10.6	10.7	9.3	20.0	46.0	7.0	53.0	7.1	0	7.1	9.4
Rhode Island State College	179	179	11.8	6.7	2.8	5.2	26.5	21.8	3.9	25.7	26.5	3.9	30.4	6.7	0	6.7	10.6
Clemson Agricultural College (S. C.)	[10] 360	180	13.3	0	7.4	8.9	28.9	24.1	2.9	27.0	26.8	9.5	36.3	7.8	0	7.8	0
South Dakota State College of Agriculture and Mechanic Arts	146	177½	7.9	9.0	0	5.1	22.0	29.6	2.8	32.4	22.0	0	22.0	3.9	0	3.9	19.7
University of Tennessee	140	140	8.5	8.6	4.3	4.3	25.7	23.6	4.2	27.8	39.3	0	39.3	7.1	0	7.1	0
Agricultural and Mechanical College of Texas	162	162	9.8	0	0	6.2	16.0	25.3	3.7	29.0	40.7	6.8	47.5	7.4	0	7.4	0
Agricultural College of Utah	132	146	2.8	8.2	0	8.2	19.2	27.0	6.9	33.9	14.5	0	14.5	10.3	0	10.3	[12] 22.1
University of Vermont and State Agricultural College	152	152	9.2	3.9	5.3	5.9	24.3	16.5	5.9	22.4	39.5	7.2	46.7	5.3	1.3	6.6	0
Virginia Agricultural and Mechanical College and Polytechnic Institute	[10] 468	228	7.9	7.9	5.3	1.7	22.8	27.0	5.2	32.2	26.1	8.4	34.5	10.5	0	10.5	0
State College of Washington	154	154	6.8	13.0	0	6.5	26.3	22.7	2.0	24.7	23.4	2.6	26.0	2.6	1.3	3.9	19.1
West Virginia University	144	163	6.2	0	0	6.1	12.3	30.0	6.5	33.5	31.9	1.8	33.7	4.9	0	4.9	12.6
University of Wisconsin	143	143	4.2	5.6	3.5	3.5	16.8	19.6	11.9	31.5	24.1	3.9	28.0	2.8	2.8	5.6	[12] 18.2
University of Wyoming	126	151	4.0	0	6.6	0	10.6	27.5	5.6	33.1	23.8	8.0	31.8	6.0	0	6.0	18.5
Mean number		164.9	6.8	2.7	2.4	4.7	16.6	24.4	6.2	30.6	31.3	5.1	36.5	4.9	0.7	5.6	10.7

[1] In this column is shown the number of credits required for graduation according to the institution's method of awarding credit. In most cases the figures represent semester-hours, but in a few cases, where the college year is divided into three terms, they represent "term hours," which are one-third lower in value. In one case, Georgia State College, the credits represent year hours, which have twice the value of semester hours.

[2] In this column is shown the number of credits required for graduation on the basis of corrected semester-hours. The numbers are the result of an attempt to make correction for varying methods of awarding credit.

[3] Under English are included grammar, composition, rhetoric, literature, library practice, argumentation, public speaking, and journalism.

[4] Under this head are included such subjects as history, civil government, economics, sociology, education (including psychology), etc.

[5] Under pure science are included general biology, general botany, plant morphology, physiology, general bacteriology, general zoology, embryology, general entomology, general chemistry, qualitative and quantitative analysis, organic chemistry, general physics, astronomy, meteorology, and geology.

[6] Under applied science are included those subjects that are more closely related to technical agriculture, such as agricultural botany, agricultural bacteriology, agricultural chemistry, economic entomology, etc.

[7] Includes veterinary subjects.

[8] Agricultural engineering includes surveying, drawing, irrigation, drainage, farm machinery, farm mechanics, farm structures, etc.

[9] Includes personal hygiene and human physiology.

[10] No distinction is made between recitation and laboratory credits.

[11] Percentage is based upon the total corrected semester hours.

[12] In this analysis many elective courses have been included to meet the requirements for students specializing in agronomy. The numbers listed, therefore, represent the amount of elective work required after satisfying the requirements for specialization.

TABLE 11.—*Summary distribution of work for graduation, by years.*

Years and hours.	Nontechnical subjects.						Technical subjects.					
	English.[1]	Foreign language.	Mathematics.	Social science.[2]	All nontechnical.	Science.[3]	Agriculture.[4]	Agricultural engineering.[5]	All technical subjects.	Military and physical training.[6]	Elective.[7]	All subjects.
Freshman year:												
Number of colleges	49	15	28	12	50	50	42	32	48	49	6	50
Maximum hours	11	8	12	6	26	24½	20	14½	24	7	12	57
Minimum hours	4	4	3	½	3	2½	1	1	2	2	2	24
Median hours[8]	6	6	6	3	12	15½	8¾	3¼	10	4	4½	41½
Sophomore year:												
Number of colleges	29	13	6	5	38	50	47	18	50	49	11	50
Maximum hours	6	8	6	9	15½	32	26	12	29½	7	13	57
Minimum hours	2	4	1½	2¾	1½	9	2	1½	3	2	2	32
Median hours[8]	4	6	4½	5¾	6	18	12	3½	12	3	5	41½
Junior year:												
Number of colleges	16	5	.....	28	37	45	50	22	50	17	32	50
Maximum hours	6	10	.....	12	15	24	30	12	30	6	30	57
Minimum hours	1	3½	.....	2¾	1	3	2	2	2	2	1	28¾
Median hours[8]	4	5	.....	5	6	12	14½	3¾	15	3	6¾	38
Senior year:												
Number of colleges	6	4	.....	32	33	33	50	19	50	10	40	50
Maximum hours	4¾	10	.....	10	15	20	28	7	34	6	24	57
Minimum hours	2	2	.....	2	2	3	2½	¾	2½	2	4	27
Median hours[8]	4	7	.....	6	6	6	17½	4	18	3	11½	37
All years:												
Number of colleges	50	20	32	45	50	50	50	45	50	49	41	50
Maximum hours	24	20	13½	22¾	61½	73½	78	21	90	24	50	228
Minimum hours	4	4	1½	3	10	34	21¼	3	21¼	4	5½	124
Median hours[8]	10	12	5	8	23	48½	51	9	60½	8	20	157

[1] Includes literature, composition, rhetoric, argumentation, public speaking, journalism, and library practice.
[2] Includes history, civil government, economics, sociology, and education.
[3] Includes, in addition to pure science courses, all science subjects closely related to agriculture, such as agricultural chemistry, economic entomology, etc.
[4] Includes veterinary subjects in addition to the strictly agricultural subjects.
[5] Includes drawing, shopwork, surveying, irrigation, drainage, farm structures, and farm equipment.
[6] Courses in personal hygiene and human physiology are classed under physical training.
[7] Includes only the elective work remaining after satisfying the requirements for specialization.
[8] In determining the median number in each case, only those colleges requiring the subject were considered.

TABLE 12.—*Average distribution of the required work for the degree of B. S. in agriculture, covering the high-school period, the college period, and the two periods combined.*

Subjects.	For admission.		For graduation.		For 8-year period.	
	Number of institutions requiring subject.	Average per cent.	Number of institutions requiring subject.	Average per cent.	Number of institutions requiring subject.	Average per cent.
English	48	20.3	50	6.8	50	13.5
Foreign language	18	14.3	20	6.7	27	10.5
Mathematics	48	15.7	32	3.7	48	9.7
Social science	36	8.2	45	5.2	49	6.7
Science	34	8.7	50	30.6	50	19.6
Technical subjects	0	.....	50	36.5	50	18.3
Military and physical training	0	.....	49	5.7	49	2.8
All prescribed subjects	48	54.1	50	89.3	50	71.6
Elective subjects	48	45.9	41	10.7	50	28.3

APPENDIX.

OUTLINE REQUIREMENTS FOR GRADUATION.

The work required for graduation in agriculture by the several institutions is shown in the outlines on the following pages. In all cases, except those indicated, the requirements are for specialization in agronomy or farm crops. In many cases the outlines include, in addition to the prescribed work, certain courses that have been selected to meet the major and minor requirements. In a few cases, where a liberal elective system prevails, a large part of the schedule has been filled in either by the writer or by an officer of the institution concerned. In all cases, except four, the schedules have been approved by some officer of the institution concerned. In the cases of the four exceptions, the outlines were not returned, and are therefore assumed to be correct.

The asterisk (*) attached to the name of a course indicates that the work is not an absolute requirement. In many cases it indicates the courses that have been added to meet major or minor requirements. In other cases it indicates that a limited degree of substitution is permitted.

In many cases the credit for the required work is shown in two or more columns. In the first column, in each case, is shown the institution's credit rating and in a parallel column is shown an adjusted rating, which is an attempt to make correction for the varying methods for awarding credit. The adjustment in most cases represents either a change from term-hours to semester-hours or an increased credit to make up for extra work required in laboratory or field practice. Since a large proportion of the institutions require but two hours of laboratory work as the equivalent of one hour of lecture or recitation work, this has been adopted as a basis of comparison. The adjustment is not entirely satisfactory, but materially assists in bringing all the institutions on a common basis from the standpoint of required work.

These outlines are presented mainly to show the source of the data upon which the tables concerning graduation are based. In many cases catalogues showing some variation in requirements have been received since making the tables. The modifications in most cases were unimportant and did not seem to warrant the remodeling of the tables. It is believed also that the assembled outlines, showing the requirements for graduation in a common subject, should be of service to officials charged with the responsibility for planning courses of study and to high-school officials who are called upon to advise prospective college students concerning collegiate courses.

ALABAMA POLYTECHNIC INSTITUTE.

[Subjects followed by asterisk (*) not absolutely required.]

FRESHMAN YEAR.	College credits (hrs. per wk.).	Term hours (2-hr. lab. basis).	Semester-hours (2-hr. lab. basis).
English composition	7	7	4⅔
English literature	8	8	5⅓
Plane trigonometry	5	5	3⅓
United States history	6	6	4
Advanced algebra	10	10	6⅔
Surveying	10	5	3⅓
Drawing	15	7½	5
Shopwork	18	9	6
General chemistry	12	12	8
Military drill	9	4½	3
Total	100	74	49⅓

SOPHOMORE YEAR.	College credits (hrs. per wk.).	Term hours (2-hr. lab. basis).	Semester-hours (2-hr. lab. basis).
Argumentation	9	9	6
European history	4	4	2⅔
Common crops	4	3	2
General zoology	10	8	5⅓
General botany	18	12	8
Physics	9	9	6
Organic chemistry	6	6	4
Qualitative chemistry	18	9	6
Agricultural chemistry	4	4	2⅔
Stock judging	6	3	2
Farm accounts	2	1½	1
Plant propagation	6	4	2⅔
Small grains	4	3	2
Military drill	9	4½	3
Total	109	80	53⅓

JUNIOR YEAR.	College credits (hrs. per wk.).	Term hours (2-hr. lab. basis).	Semester-hours (2-hr. lab. basis).
English literature*	9	9	6
Dairying	4	4	2⅔
Agricultural bacteriology	6	4	2⅔
Veterinary science	15	12	8
Drainage	4	3	2
Landscape gardening	2	2	1⅓
Vegetable gardening	8	6	4
Orchard technique	2	1	⅔
Stock judging	8	4	2⅔
Quantitative analysis	18	9	6
Geology	4	4	2⅔
Physiological botany	12	8	5⅓
Military tactics	3	3	2
Military drill	9	4	2⅔
Total	104	73	48⅔

SENIOR YEAR.	College credits (hrs. per wk.).	Term hours (2-hr. lab. basis).	Semester-hours (2-hr. lab. basis).
Cotton	6	4	2⅔
General entomology	5	4	2⅔
Economic entomology	5	4	2⅔
Soils	15	15	10
Farm management	4	3	2
Farm machinery	2	1	⅔
Forestry	5	4	2⅔
Thesis	12	6	4
Modern language	11	11	7⅓
Military science	3	3	2
Elective (limited)	8	8	5⅓
Total	76	63	42

UNIVERSITY OF ARIZONA.

Students are not required to follow any prescribed schedule, even in the first year. A suggestive outline is presented only for the guidance of students. Of the 124 credit hours required for graduation, 86 hours are prescribed, but, except for prerequisite requirements, they may be taken at any time. The following outline shows the suggested schedule with selected courses of the agronomy group included:

FRESHMAN YEAR.	University credits.	Semester hours (2-hr. lab. basis).	SOPHOMORE YEAR.	University credits.	Semester hours (2-hr. lab. basis).
English exposition	3	3	Modern language	4	4
Argumentation	3	3	Biology (general)	4	5
Modern language	4	4	Botany (physiology)	4	5
Chemistry (general)	8	9	Soil physics	4	4½
Algebra	3	3	Soil fertility	4	4½
Trigonometry (plane)	2	2	Stock judging	3	3½
Farm crops	3	3	Elective (limited)	7	8½
Drawing (mechanical)	2	3	Military tactics	2	3
Elective (limited)	2	2			
Military tactics	2	3			
Total	32	35	Total	32	38
JUNIOR YEAR.			**SENIOR YEAR.**		
Modern language or literature	4	4	Modern language or literature	4	4
Plant breeding	3	3	Economics (general)	6	6
Physics (general)	8	8	Farm management	3	3½
Meat production	3	3	Vegetable gardening	3	3
Plant propagation	3	4	Dry farming	3	3
Soil bacteriology	4	4½	Agronomy literature	3	3
Chemistry (qualitative)	4	5½	Chemistry (quantitative)	4	5½
Elective (free)	1	1	Elective (free)	4	4
Total	30	33	Total	30	32

UNIVERSITY OF ARKANSAS.

FRESHMAN YEAR.	University credits.	Semester hours (2-hr. lab. basis).	SOPHOMORE YEAR.	University credits.	Semester hours (2-hr. lab. basis).
Farm crops	6	6	Soil physics	5	6
Breeds of live stock	3	3	Chemistry (organic)	3	3
Biology (general)	6	6	Chemistry (qualitative)	3	4
Chemistry (elementary)	6	7	Mathematics	4	4
Composition and rhetoric	6	6	Physics (general)	5	5
Plant propagation	3	3	Entomology (general)	3	3½
Shopwork	2	3	Bacteriology	5	5
			Stock judging	3	3
Military science and tactics	2	4	Drawing (mechanical)	2	2
			Surveying	1	1
			Military science and tactics	2	4
Total	34	38	Total	36	40½
JUNIOR YEAR.			**SENIOR YEAR.**		
Composition	6	6	Economics (rural)	6	6
Chemistry (quantative)	3	4½	Farm management	6	6
Chemistry (agricultural)	3	3	Soil fertility	5	6
Feeds and feeding	3	3	Plant pathology	3	3½
Farm crops	6	6	Thesis	4	4
Poultry	6	6	Feeds and feeding	6	6
Elective (approved)	7	8	Elective (approved)	4	4½
Total	34	36½	Total	34	36

UNIVERSITY OF ILLINOIS.

The following outline contains the prescribed work and selected subjects to meet the requirements for a student specializing in agronomy. Only the work of the first two years is prescribed by the university. Within wide limits the work of the junior and senior years is elective; the selection of studies for these years shown below has been approved by the dean's assistant as constituting a satisfactory program for a student specializing in agronomy.

[Subjects followed by asterisk (*) not absolutely required.]

FRESHMAN YEAR.	University credits.	Semester-hours. (2-hr. lab. basis.)	SOPHOMORE YEAR.	University credits.	Semester-hours. (2-hr. lab. basis.)
Country-life problems	1	2	Genetics	1	2
Farm crops	4	5	Stock feeding	2	3
Chemistry (inorganic)	8	11	Botany (general)	5	7
Horticulture (elementary)	4	6	Farm mechanics	3	3½
Live stock judging	3	3	Chemistry (quantitative)	5	7
Dairying (elementary)	1	2	English writers	4	4
Rhetoric and themes	6	6	Military drill	2	2
Gymnastics and hygiene	2	2	Elective (free)	10	13
Military drill	2	2			
Drill regulations	1	1			
Elective (free)	4	4			
Total	36	44	Total	32	41½
JUNIOR YEAR.			**SENIOR YEAR.**		
Field machinery*	3	4	Soil fertility (advanced)*	2	3
Farm crops (advanced)*	3	3	Soil biology*	5	6
Special crops*	5	5	Plant breeding*	2	2
Soil physics and management*	5	7	Thesis*	7	7
Soil fertility*	5	7	Farm management*	3	3
Chemistry (organic)*	3	3	Entomology (elementray)*	4	4
Plant diseases*	3	3	Entomology (economic)*	3	3
Economics*	3	3	American government*	2	2
Marketing farm produce*	2	2	Agricultural cooperation*	2	2
Total	32	37	Total	30	32

PURDUE UNIVERSITY.

FRESHMAN YEAR.	University credits.	Semester-hours. (2-hr. lab. basis.)	SOPHOMORE YEAR.	University credits.	Semester-hours. (2-hr. lab. basis.)
Drawing farm buildings	2	3	Soils	3	3½
Live stock judging	5	6	Field crops	3	3½
Botany (agricultural)	3	3½	Soil fertility	3	3½
Biology (general)	6	7	Farm mechanics	3	4
Chemistry (general)	8	9	Live stock management	4	4½
English (composition)	6	6	Milk	3	3½
Trigonometry	3	3	English literature	6	6
Algebra	3	3	Fruit growing	3	3½
Entomology	3	3½	Vegetable gardening	3	3½
Poultry	3	3½	Chemistry (qualitative)	8	10
Military drill	2	3	Military drill	2	3
Total	44	50½	Total	41	45½
JUNIOR YEAR.			**SENIOR YEAR.**		
Genetics	3	3	Farm management	6	6
Animal nutrition	3	3	Economics	6	6
History	6	6	Thesis	4	5
Soils	4	5	Soils	3	3½
Field crops	4	5	Field crops	3	3½
Chemistry (agricultural)	3	3½	Bacteriology	4	5
Soil fertility	3	3½	Soil bacteriology	4	5
Fungous diseases	4	5	Chemistry (quantitative)	8	10
Vegetable physiology	4	5	Modern language	6	6
Modern language	6	6			
Total	40	45	Total	44	50

CONNECTICUT AGRICULTURAL COLLEGE.

Since most of the work of the last two years is elective, this schedule includes, in addition to the required work, certain courses that are recommended for students specializing in agronomy.

[Subjects followed by asterisk (*) not absolutely required.]

FRESHMAN YEAR.	Semester-hours.	SOPHOMORE YEAR.	Semester-hours.
Types and breeds of live stock	3	Soil management	3
Field crops	3	Farm machinery	3
Shopwork and drawing	3	Farm management	3
Botany (general)	4	Geology (general)	3
Zoology	4	Chemistry (inorganic)	8
English	6	English	4
Military training	3	Military training	3
Physical training	2	Elective (approved)	13
Elective (approved)	12		
Total	40	Total	40

JUNIOR YEAR.		SENIOR YEAR.	
History (constitutional)	6	Soil bacteriology*	3
Economics (general)	6	Farm management surveys*	3
Field crops (advanced)*	6	Chemistry (agricultural)*	3
Bacteriology (general)*	4	Plant pathology*	3
Genetics*	3	Field crops*	4
Plant physiology*	3	Soil fertility*	4
Organic chemistry*	4	Agricultural engineering*	3
Military training	3	Military training	3
		Electives (approved)	9
Total	35	Total	35

DELAWARE COLLEGE.

The following outline includes 18 hours work in selected courses to meet the requirements for specialization in agronomy.

FRESHMAN YEAR.	Semester-hours.	SOPHOMORE YEAR.	Semester-hours.
Composition	6	English literature	4
Geometry	2	Modern language	6
Trigonometry	2	Chemistry (organic)	6
Modern language	6	Chemistry (qualitative)	1½
History	1	Chemistry (quantitative)	1½
Botany (general)	6	Physics	8
Chemistry (inorganic)	6	Physical training (gymnastics)	1
Agriculture (general)	4	Military science	3
Physical training (gymnastics)	1	Animal husbandry (elective)	4
Elective (limited)	2	Horticulture (elective)	4
Military science	3	Elective (free)	2
Total	39	Total	41

JUNIOR YEAR.		SENIOR YEAR.	
Zoology	6	Sociology	3
Bacteriology	6	Economics	3
Chemistry (agricultural)	6	Genetics	3
Military science	3	Farm management	3
Field crop production	3	Thesis	3
Cereal crops	3	Military science	3
Soil fertility	6	Forage crops	3
Elective (free)	2	Farm equipment	3
		Plant breeding	2
		Soils (investigation)	3
		Elective (free)	6
Total	35	Total	35

UNIVERSITY OF KENTUCKY.

In the following outline six courses have been added to meet the requirements of the agronomy option.

[Subjects followed by asterisk (*) not absolutely required.]

FRESHMAN YEAR.	University credits.	SOPHOMORE YEAR.	University credits.
Stock judging	6	Forage crops*	3
Botony (morphology)	4	Cereal crops	4
Botany (systematic)	4	English literature	4
Chemistry (inorganic)	11	Chemistry (agricultural)	5
English composition	6	Entomology	4
Military science	3	Horticulture (elementary)	3
Physical training (gymnastics)	2	Zoology	4
		Geology	3
		Anatomy and physiology of farm animals	3
		Physical training	2
		Military science	3
Total	36	Total	35
JUNIOR YEAR.		**SENIOR YEAR.**	
Economics (agricultural)	3	Farm engineering*	4
Soil physics	4	Soil physics (advanced)*	4
Soil fertility	5	Farm management (advanced)*	3
Bacteriology	4	Field crops*	2
Pomology	3	Soil fertility (advanced)*	2
Special crops*	4	Elective (approved)	20
Grain judging	2		
Farm management	3		
Farm mechanics*	3		
Farm machinery	3		
Elective (approved)	2		
Total	36	Total	35

LOUISIANA STATE UNIVERSITY.

In the following outline six courses have been added to the work of the junior and senior years to meet the major option requirements.

[Subjects followed by asterisk (*) not absolutely required.]

FRESHMAN YEAR.	University credits.	Semester hours (2-hr. lab. basis).	SOPHOMORE YEAR.	University credits.	Semester hours (2-hr. lab. basis).
Composition and literature	6	6	Chemistry (general)	8⅔	10
Algebra	3	3	Physics	7½	8
Trigonometry	3	3	Farm crops	2⅔	3
Botany (general)	6⅔	8	Forage crops	2⅔	3
Stock breeding and judging	7½	8	Zoology (general)	6⅔	8
Farm machinery	6⅔	8	Horticulture (principles)	5⅓	6
Military science	4	5	Military science	4	5
Total	36⅔	41	Total	37½	43
JUNIOR YEAR.			**SENIOR YEAR.**		
Dairying	4½	5	Farm management*	4	4
Feeds and feeding	5⅓	6	Farm crops (advanced)*	3½	4
Soil physics	4½	5	Forage crops (advanced)*	3½	4
Soil fertility*	4	4	Soil physics (advanced)*	4⅔	6
Drainage*	4	5	Elective (approved)	14⅔	18
Farm machinery (power)*	4	5			
Elective (approved)	6⅔	8			
Total	32⅔	38	Total	30	36

UNIVERSITY OF MAINE.

FRESHMAN YEAR.	University credits.	Semester hours (2-hr. lab. basis).	SOPHOMORE YEAR.	University credits.	Semester hours (2-hr. lab. basis).
Field crops	2	2	Soils	3	3½
Chemistry (general)	9	9	Field crops	3	3
Drawing	2	3	Live stock management	2	2
Types and breeds of live stock	2	2	Live stock judging	1	1
Live stock judging	1	1	Biochemistry	7	7
Botany (general)	4	4	Biology	2	2
Public speaking	2	2	Entomology	4	4
English composition	4	4	Chemistry (organic)	3	3
Modern language	5	5	Pomology	3	3½
Zoology (general)	4	4	Trigonometry	5	5
Physical training (gymnastics)	1½	3	Poultry	5	5
Military art	2	3	Military art	2	3
Total	38½	42	Total	40	42
JUNIOR YEAR.			**SENIOR YEAR.**		
Field crops	2	2	Soil fertility	2	2
Field crops (judging)	2	2	Root crops	2	2
Forage crops	2	2	Farm management	3	3½
Crop improvement	2	2	Agricultural engineering (general)	6	7
Dairying (general)	4	4	Farm accounts	2	2
Live stock feeding	2	2	Elective (approved)	16½	18
Chemistry (agricultural)	2	2			
Bacteriology	5	5			
Botany (general)	5	5			
Plant physiology and pathology	5	5			
Composition	2	2			
Literary types	2	2			
Electives (approved)	5	5½			
Total	40	40½	Total	31½	34½

MARYLAND STATE COLLEGE OF AGRICULTURE.

[Subjects followed by asterisk (*) not absolutely required.]

FRESHMAN YEAR.	College credits.	Semester-hours. (2-hr. lab. basis.)	SOPHOMORE YEAR.	College credits.	Semester-hours. (2-hr. lab. basis.)
Trigonometry	5	3½	Composition	6	4
Rhetoric and composition	15	10	Public speaking	3	2
History (American)*	9	6	Modern language	9	6
Modern language	9	6	Farm crops	3	2
Farm crops	4	2⅔	Soils	8	5⅓
Live stock breeds	3	2	Fertilizers	4	2⅔
Live stock management	5	3⅓	Pomology	6	4
Botany (general)	5	3⅓	Vegetable culture	7	4⅔
Zoology (general)	8	5⅓	Landscape gardening	4	2⅔
Chemistry (general)	10	6⅔	Plant histology	4	2⅔
Drawing (free-hand)	2	1⅓	Plant physiology	7	4⅔
Military instruction	6	4	Entomology	4	2⅔
			Chemistry (inorganic)	5	3⅓
			Chemistry (qualitative)	5	3⅓
			Military instruction	6	4
Total	81	54	Total	81	54

JUNIOR YEAR.	College credits.	Semester-hours. (2-hr. lab. basis.)	SENIOR YEAR.	College credits.	Semester-hours. (2-hr. lab. basis.)
Physics	12	8	English composition	3	2
Composition	5	3⅓	Political economy	12	8
Public speaking	3	2	Genetics (crops)	6	4
Civil government	6	4	Genetics (horticulture)	6	4
Business law	3	2	Soils (advanced)	4	2⅔
Psychology	4	2⅔	Farm management	8	5⅓
Soils (advanced)	2	1⅓	Dairy management	4	2⅔
Grain judging	3	2	Poultry	3	2
Animal nutrition	4	2⅔	Plant anatomy and physiology	3	2
Stock judging	4	2⅔	Animal diseases	5	3⅓
Plant pathology	4	2⅔	Forestry	4	2⅔
Geology	5	3⅓	Chemistry (agricultural)	6	4
Chemistry (organic)	4	2⅔	Farm drainage	2	1⅓
Bacteriology	8	5⅓	Farm machinery	4	2⅔
Surveying	4	2⅔	Farm buildings	3	2
Drawing (mechanical)	2	1⅓	Thesis	2	1⅓
Woodwork	2	1⅓	Military instruction	3	2
Military instruction	3	2			
Total	78	52	Total	78	52

MASSACHUSETTS AGRICULTURAL COLLEGE.

The institution's published outlines are regarded as suggestive only. In the suggested agronomy schedule presented here four nontechnical courses have been added to meet group requirements. Since the preparation of this statement the total requirement for graduation has been increased by 14 term-hours or 9⅓ semester-hours.

[Subjects followed by asterisk (*) not absolutely required.]

FRESHMAN YEAR.	College credits.	Semester-hours (2-hr. lab. basis).	SOPHOMORE YEAR.	College credits.	Semester-hours (2-hr. lab. basis).
Chemistry (general)	3	2	Physics	7	4⅔
Chemistry (inorganic agricultural)	3	2	Zoology	3	2
Chemistry (organic agricultural)	3	2	Botany	6	4
Algebra	7	4⅔	English (literature)	6	4
Geometry (solid)	3	2	Economics (agricultural)	5	3⅓
Trigonometry	3	2	Sociology (rural)	3	2
Mensuration	2	1⅓	Soils and fertilizers	5	3⅓
Modern language	9	6	Chemistry (qualitative)	6	4
English literature	9	6	Modern language	9	6
Farm crops	1	⅔	Geology	5	3⅓
Live stock (types)	1	⅔	Physical education	1	[1] (1)
Poultry	1	⅔	Military tactics	2	1⅓
Pomology	1	⅔	Military drill	2	[1] (2)
Public speaking	3	2			
Geology (agricultural)	2	1⅓			
Botany (general)	3	2			
Hygiene	1	⅔			
Gymnastics	1	[1] (1)			
Military tactics	2	1⅓			
Military drill	2	[1] (2)			
Total	60	41	Total	60	41

JUNIOR YEAR.			SENIOR YEAR.		
Field and forage crops	5	3⅓	Soils	5	3⅓
Field crops (advanced)	5	3⅓	Fertilizers	5	3⅓
Chemistry (organic)	16	10⅔	Farm management	5	3⅓
Economics (general)*	5	3⅓	Live stock (feeding)	3	2
English (literature)*	5	3⅓	Cooperation in agriculture*	5	3⅓
History (economic)*	3	2	Elective (free)	27	18
Physical education	1	[1] (1)			
Military science	2	1⅓			
Military drill	2	[1] (2)			
Elective (free)	6	4			
Total	50	34⅓	Total	50	33⅓

[1] The figures in parentheses are the results of two adjustments—one in changing from term-hours to semester-hours and the other in making allowance for extra laboratory or field work required in the subjects concerned.

MICHIGAN AGRICULTURAL COLLEGE.

FRESHMAN YEAR.	College credits.	Semester-hours (2-hr. lab. basis).	SOPHOMORE YEAR.	College credits.	Semester-hours (2-hr. lab. basis).
Live stock, types, breeds	3	2	Bacteriology	6	4
Agriculture (economic history)	2	1½	Surveying	3	2
Economics	3	2	Public speaking	6	4
Botany (morphology)	4	2⅔	Dairying	3	2
Botany (systematic)	4	2⅔	Fruit growing	3	2
Botany (physiology)	3	2	Plant propagation	2	1½
Chemistry (general)	5	3½	Physics	10	6⅔
Chemistry (qualitative)	5	3½	Soils	2	1½
Chemistry (organic)	5	3½	Soil fertility	3	2
Composition	9	6	Forage crops	2	1½
Shop work	4	[1] (4)	Zoology (general)	5	3⅓
Cereal crops	3	2	Zoology (physiology)	5	3⅓
Forestry	3	2	Entomology	5	3⅓
Mathematics (agricultural)	4	2⅔	Geology	5	3⅓
Trigonometry (plane)	3	2	Military science	3	[1] (3)
Military science	3	[1] (3)			
Total	63	44½	Total	63	43
JUNIOR YEAR.			**SENIOR YEAR.**		
Live stock (breeds)	3	2	Grain judging	5	3⅓
Live stock (feeding)	5	3½	Crop improvement	5	3⅓
Live stock (breeding)	2	1½	Special crops	5	3⅓
Farm management	3	2	Soil physics	5	3⅓
Poultry	2	1½	Soil fertility	5	3⅓
Elective (limited)	45	30	Soil surveying	5	3⅓
Military science	3	3	Elective (limited)	30	20
Total	63	43	Total	60	40

[1] The figures in parentheses are the results of two adjustments—one in changing from term-hours to semester-hours and the other in making allowance for extra laboratory or field work required in the subjects concerned.

UNIVERSITY OF MINNESOTA.

[Subjects followed by asterisk (*) not absolutely required.]

FRESHMAN YEAR.	University credits.	Semester-hours (2-hr. lab. basis).	SOPHOMORE YEAR.	University credits.	Semester-hours (2-hr. lab. basis).
Botany (general)	3	4	Economics (principles)	3	3
Botany (structural)	3	4	Economics (agricultural)*	3	3
Rhetoric	6	6	Argumentation	6	6
Chemistry (general and qualitative)	6	8	Zoology (general)	6	8
Algebra (higher)	3	3	Drawing (mechanical)	3	3
Horticulture (general)	3	3	Physics (general)*	6	6
Live stock (breeds and types)	3	3	Bacteriology	3	4
Dairy husbandry	3	3	Chemistry (agricultural)	3	3
Farm crops	3	3	American Government	3	3
History (industrial)	3	3	Military drill	0	2
Military drill	0	2			
Hygiene and freshman lectures	0	1			
Total	36	43	Total	36	41
JUNIOR YEAR.			**SENIOR YEAR.**		
Farm crops	3	3½	Farm management	6	6
Farm management	3	3	Genetics	3	3
Entomology (economic)	3	3½	Plant breeding	3	3
Animal nutrition	3	3	Grain judging	3	3
Dairy stock feeding and management	3	3	Farm structures	3	3½
Plant pathology	3	3½	Weeds and seeds	3	4
Veterinary medicine	3	3	Live stock feeding	3	3
Soil physics and management	3	3	Farm machinery*	3	3
Soil fertility	3	3	Elective (free)	9	9½
Farm engineering	3	3			
Elective (free)	6	6½			
Total	36	38	Total	36	38

MISSISSIPPI AGRICULTURAL AND MECHANICAL COLLEGE.

[Subjects followed by asterisk (*) not absolutely required.]

FRESHMAN YEAR.	College credits.	Semester-hours (2-hr. lab. basis).	SOPHOMORE YEAR.	College credits.	Semester-hours (2-hr. lab. basis).
Agricultural (general)	5	3½	Botany (general)	8	5½
Field crops	5	3½	Plant diseases	4	2⅔
Soils	5	3½	Argumentation	3	2
Farm botany	4	2⅔	Exposition	3	2
Drawing (free-hand)	2	1⅓	English literature	3	2
Drawing (mechanical)	1	⅔	Algebra	6	4
Rhetoric	9	6	Trigonometry	3	2
History	9	6	Live stock (breeds)	5	3½
Geometry	10	6⅔	Chemistry (inorganic)	18	12
Shopwork	2	1⅓	Dairying	4	2⅔
Physics	8	5⅓	Zoology	5	3½
Geology	3	2	Plant propagation	4	2⅔
Poultry	1	⅔	Farm accounts	2	1⅓
Farm machinery	2	1⅓	Military science	7	4⅔
Veterinary pathology	4	2⅔			
Physical education (gym.)	3	2			
Personal hygiene	1	⅔			
Military science	3	2			
Total	77	51⅓	Total	75	50

JUNIOR YEAR.			SENIOR YEAR.		
Soil management (fertility)	6	4	Forestry	3	2
Forage crops	5	3⅓	Civil government	3	2
Geology	4½	3	Entomology	4	2⅔
Live stock feeding	5	3⅓	Bacteriology	4	2⅔
Chemistry (organic)	6½	4⅓	Surveying and drainage	5½	3⅔
Chemistry (agricultural)	6½	4⅓	Farm organization	4	2⅔
Dairying	6	4	Plant breeding*	4	2⅔
Entomology	8	5⅓	Soil fertility*	4	2⅔
Horticulture (general)	4	2⅔	Grasses and legumes*	4	2⅔
Veterinary anatomy and physiology	5	3⅓	Research (thesis)*	7½	5
Farm machinery	5	3⅓	Elective (approved)	21½	14⅓
Economics (rural)	4	2⅔	Military science	3	2
Poultry	4	2⅔			
Military science	3	2			
Total	72½	48⅓	Total	67½	45

UNIVERSITY OF MISSOURI.

To meet the major requirements six courses in farm crops have been included in the following schedule:

[Subjects followed by asterisk (*) not absolutely required.]

FRESHMAN YEAR.	Semester-hours.	SOPHOMORE YEAR.	Semester-hours.
Live stock types	3	Bacteriology	3
Botany (general)	5	Chemistry (qualitative)	5
Chemistry (inorganic)	5	Chemistry (organic)	3
Composition and rhetoric	6	Entomology	3
Horticulture (general)	3	Dairying	3
Physics	5	Farm crops	5
Zoology	5	Geology	3
Military science	2	Elective	5
		Military science	2
Total	34	Total	32

JUNIOR YEAR.		SENIOR YEAR.	
Animal nutrition	3	Grain judging	3
Field-crop improvement*	3	Field-crop management	2
Plant physiology	5	Cereal crops	3
Social science	5	Forage crops	3
Chemistry (agricultural)	3	Crop improvement	3
Soils (physics and fertility)	5	Special problems	3
Elective	7	Elective	10
Total	31	Total	27

MONTANA STATE COLLEGE OF AGRICULTURE AND MECHANIC ARTS.

FRESHMAN YEAR.	College credits.	Semester-hours. 2 hour lab. basis.	SOPHOMORE YEAR.	College credits.	Semester-hours. 2 hour lab. basis.
English composition	6	6	Composition (exposition)	4	4
Chemistry (general)	8	9	Chemistry (organic)	5	5½
Botany (general)	5	4½	Chemistry (agricultural)	5	5½
Mathematics	3	3	Forage crops	4	4½
Dairying	3	3½	Field crops	4	4½
Physics (agricultural)	5	5½	Horticulture	4	4
Plant propagation	3	3½	Zoology	3	3½
Live stock (types)	3	3½	Entomology (economic)	4	4½
Military drill	2	2½	Geology	3	3
			Military drill	2	2½
Total	38	40½	Total	38	41½
JUNIOR YEAR.			**SENIOR YEAR.**		
Economics	4	4	Farm management	4	4
Soil physics	5	5½	Soil management	2	2
Soil fertility	3	3	Grain judging	2	2½
Bacteriology	5	5½	Surveying	3	3½
Plant physiology	4	4½	Farm mechanics	3	3½
Organic evolution	3	3	Farm accounts	2	2
Live stock (breeds)	4	4½	Animal diseases	4	4
Elective (free)	9	10	Plant pathology	4	4½
			Genetics	4	4
			Thesis	4	4
			Elective (free)	5	5½
Total	37	40½	Total	37	39

UNIVERSITY OF NEBRASKA.

The following outline includes eight courses to meet major option requirements:

[Subjects followed by asterisk (*) not absolutely required.]

FRESHMAN YEAR.	University credits.	Semester hours (2-hr. lab. basis).	SOPHOMORE YEAR.	University credits.	Semester hours (2-hr. lab. basis).
Botany (elementary)*	6	10	Chemistry (organic)	5	6
Chemistry (inorganic)	6	8	Zoology	6	9
Composition and rhetoric	4	4	Forage crops (management)	3	4
Live stock (breeds)	4	4	Soil physics	4	4
Shopwork	4	6	Fruit growing	2	2
Geology	3	3	English (composition)*	6	4
Dairying	4	5	Military science	2	3
Military science	2	3	Elective	4	5
Total	33	43	Total	32	37
JUNIOR YEAR.			**SENIOR YEAR.**		
Farm organization	3	3	American government*	6	6
Economics	3	3	Farm machinery and spraying machinery*	3	4
Economics (rural)	2	2	Soil fertility*	4	4
Physics*	6	9	Soil management*	2	2
Cereal crop management*	4	4	Plant pathology*	3	6
Soil chemistry and biology*	4	4	Entomology (economic)*	3	6
Field crop practices*	2	2	Elective (free)	7	9
Elective (free)	8	10			
Total	32	37	Total	28	37

UNIVERSITY OF NEVADA.

The following represents the agronomy-horticulture option:

FRESHMAN YEAR.	University credits.	Semester-hours (2-hr. lab. basis).	SOPHOMORE YEAR.	University credits.	Semester-hours (2-hr. lab. basis).
Composition and rhetoric	6	6	Chemistry (organic)	2	2
Zoology	4	4½	Chemistry (quantitative)	2	2½
Botany (general)	4	4½	Chemistry (agricultural)	8	9
Agriculture (general)	3	3	Live-stock judging	4	4½
Live-stock breeds	3	3	Live-stock feeding	3	3
Chemistry (inorganic)	4	4½	Forage crops	4	4½
Chemistry (qualitative)	4	4½	Dairying	3	3½
Shopwork	2	2½	Physics	4	4½
Elective (free)	6	6½	Elective (free)	6	6½
Military science	2	2	Military science	2	2
Total	38	41	Total	38	41½
JUNIOR YEAR.			**SENIOR YEAR.**		
Surveying	4	4½	Farm management	5	5½
Rural hygiene	4	4½	Irrigation	5	5½
Farm structures	4	4½	Teaching agriculture	3	3
Farm machinery	3	3	Veterinary pathology	3	3
Cereals	4	4½	Plant physiology	3	3½
Botany (taxonomy)	3	3	Plant breeding	3	3
Horticulture (general)	3	3½	Electives (free)	14	15½
Zoology (economic)	3	3½			
Elective (free)	8	8½			
Total	36	39	Total	36	38½

NEW HAMPSHIRE COLLEGE.

The following represents the required work for the horticultural option:

FRESHMAN YEAR.	College credits.	Semester-hours (2-hr. lab. basis.)	SOPHOMORE YEAR.	College credits.	Semester-hours (2-hr. lab. basis).
History of agriculture	1	1	Farm poultry	3	3
Chemistry (inorganic)	6	6	Principles of forestry	3	3½
English composition	6	6	Economic entomology	3	3½
Algebra and trigonometry	4	4	Agricultural engineering	3	3½
Zoology	6	6½	Live stock (breeds)	3	3
Drawing	2	2½	Chemistry (qualitative)	5	6½
Surveying	2	2	Dairying	3	3½
Botany	6	7	Vegetable gardening	2	2½
Military science	4	4	Pomology	3	3½
			Physics	4	4
			Military science	4	4
Total	37	39	Total	36	39½
JUNIOR YEAR.			**SENIOR YEAR.**		
Field crops	3	3½	Farm management	3	3½
Soils	3	3½	Fertilizers	3	3
Plant physiology	3	3½	Economics	3	3
Greenhouse construction and management	3	3½	Economics (agricultural)	3	3
Geology	3	3	Evolution of plants	2	2
Landscape gardening	3	3½	Meteorology	2	2
Nursery management	3	3½	Plant pathology	3	3½
Floriculture	2	2½	Pomology	4	4½
Vegetable forcing	3	3½	Horticulture seminar	1	1½
Bacteriology	3	3	Elective (approved)	11	12
Shopwork	3	3½			
Elective (approved)	4	4			
Total	36	39	Total	35	37½

RUTGERS COLLEGE.

The following represents the required work for the soil fertility option·

[Subjects followed by asterisk (*) not absolutely required.]

FRESHMAN YEAR	College credits.	Semester-hours (2-hr. lab. basis.)	SOPHOMORE YEAR.	College credits.	Semester-hours (2-hr. lab. basis).
Rhetoric and composition	2	2	American literature	2	2
English literature	4	4	English literature	2	2
Algebra	3	3	Modern language	6	6
Geometry	5	5	Physics	6	7
Trigonometry	2	2	Chemistry (qualitative)	4	4½
Chemistry (general)	6	7	Soils	3	3½
Modern language	8	8	Farm crops	3	3½
Drawing	4	5	Dairying	2	2½
Hygiene	1	1	Poultry	2	2½
Military science	2	3	Plant physiology	3	3½
			Botany (general)	3	3½
			Military science	2	3
Total	37	40	Total	38	43½

JUNIOR YEAR.			SENIOR YEAR.		
History *	6	6	Economics *	4	4
Fertilizers	2	2	Constitutional law	4	4
Chemistry (quantitative)	4	5	Soil fertility	12	14
Plant propagation	3	3½	Soil microbiology	6	7
Bacteriology	3	3½	Geology (rocks and soils)	6	7
Zoology	5	6	Thesis	4	5
Entomology	3	3½			
Plant pathology	2	2½			
Live-stock types	3	3½			
Pomology	4	4½			
Total	35	40	Total	36	41

NEW MEXICO COLLEGE OF AGRICULTURE AND MECHANICAL ARTS.

FRESHMAN YEAR.	Semester-hours.	SOPHOMORE YEAR.	Semester-hours.
Rhetoric and composition	6	Chemistry (organic)	2
Chemistry (general)	9	Chemistry (agricultural)	5
Botany (general)	7	Dairying	3½
Live stock (types)	5½	Cereals	3
Farm motors	3½	Forest crops	3
Physics (agricultural)	3	Bacteriology	3½
Agronomy (elementary)	2	Zoology (general)	3½
Plant propagation	2½	Physiology (human)	4
Military science	3	Surveying	4
		Farm machinery	2½
		Vegetable gardening	3
		Landscape gardening and floriculture	2
		Military science	3
Total	41½	Total	42

JUNIOR YEAR.		SENIOR YEAR.	
Soil physics	3½	Geology	4
Soil fertility	3½	Farm management	6
Fruit growing	3	Sociology	2
Stock feeding	3	Economics	3
Entomology (general)	3	Thesis	5
Entomology (economic)	2½	Plant breeding	3
Veterinary science	3	Agronomy (experimental)	1½
Irrigation	3	Agronomy (seminar)	2
Grain judging	1½	Elective (limited)	6
Seeds	1		
Plant pathology	3½		
Plant histology	3½		
Total	34	Total	32½

CORNELL UNIVERSITY.

The following table shows the distribution of the required work in the four-year agricultural curriculum:

FRESHMAN YEAR.		SOPHOMORE YEAR.		JUNIOR YEAR.		SENIOR YEAR.
	Hours.		*Hours.*		*Hours.*	
English	8	Geology	3	Political science	6	
Chemistry	6	Physics	5			
Biology	3	Physiology	3			
Zoology	6	Chemistry, mathematics, or bacteriology	5			
Botany	6	Drill.				
Natural history of the farm	1					
Drill.						

The following outline includes the above-required work and, in addition, a selected list of elective courses recommended for students specializing in farm crops:

[Subjects followed by asterisk (*) not absolutely required.]

SOPHOMORE YEAR.	University credits.	Semester-hours (2-hr. lab. basis).	SOPHOMORE YEAR	University credits.	Semester-hours (2-hr. lab. basis).
English	8	8	Geology	3	3½
Chemistry (inorganic)	6	6½	Chemistry (agricultural)	4	4
Chemistry (qualitative and quantitative)	5	6½	Botany (general)	6	6½
Biology (general)	6	6½	Plant physiology	4	4½
Physics	5	5	Economics	6	6
The farm (agricultural environment)	2	2½	Meteorology	3	3½
Military science	0	3	Pomology	3	3½
			Military drill	0	3
Total	32	37½	Total	29	33½
JUNIOR YEAR.			**SENIOR YEAR.**		
Farm crops*	4	4½	Farm crops (advanced)*	3	3
Special crops*	3	3½	Genetics*	3	3
Soil management*	3	3½	Farm management*	4	4½
Vegetable gardening*	2	2½	Soil technology*	3	3½
Bacteriology*	4	5½	Plant breeding*	4	4½
Plant pathology*	3	4½	Rural economy*	3	3
Farm management*	2	2½	Animal husbandry*	5	5½
Botany*	2	2½	Entomology (general)*	3	3½
Rural engineering*	6	6½	Plant pathology*	3	3½
Total	29	34½	Total	31	33½

NORTH CAROLINA COLLEGE OF AGRICULTURE AND ENGINEERING.

[Subjects followed by asterisk (*) not absolutely required.]

FRESHMAN YEAR.	Semester-hours.	SOPHOMORE YEAR.	Semester-hours.
Botany (general)	6	Farm equipment	2
Chemistry (inorganic)	6	Dairying	3
Drawing	2	Botany (general)	5
Woodworking	2	Chemistry (qualitative)	6
Composition and rhetoric	3	Rhetoric	3
American literature	3	Public speaking	3
Algebra	5	Geology	2
Geometry	5	Plant propagation	3
Zoology (general)	6	Physics (agricultural)	6
Military drill	4	Veterinary anatomy and physiology	5
		Zoology (general)	2
		Military drill	4
Total	42	Total	44

JUNIOR YEAR.		SENIOR YEAR.	
Farm crops	6	Farm crops	12
Live stock (breeds)	3	Farm management	3
Live stock (feeding)	3	Animal breeding	3
Chemistry (quantitative)	2	Plant breeding	3
Chemistry (agricultural)	2	Chemistry (organic)	6
English literature	6	Economics (agricultural)	6
Pomology	6	Soil fertility	3
Vegetable gardening	3	Drainage	3
Poultry	3	Entomology (economic)	3
Soils	6	Elective (free)	6
Modern language*	4		
Economics*	4		
Total	48	Total	48

NORTH DAKOTA AGRICULTURAL COLLEGE.

FRESHMAN YEAR.	College credits.	Semester-hours (2-hr. lab. basis).	SOPHOMORE YEAR.	College credits.	Semester-hours (2-hr. lab. basis).
Gas engines	3	2	Dairying (elements)	3	2
Composition	4	2⅔	Animal husbandry (feeds and feeding)	3	2
Argumentation	4	2⅔	Veterinary science (general)	14	9⅓
Chemistry (general)	5	3⅓	Farm crops	5	3⅓
Chemistry (inorganic)	4	2⅔	Chemistry (quantitative)	5	3⅓
Chemistry (qualitative)	6	4	Soil physics	5	3⅓
Judging live stock	4	2⅔	Soil management (fertility)	5	3⅓
Breeds of live stock	10	6⅔	Zoology (general)	9	6
Botany (general)	13	8⅔	Chemistry (organic)	9	6
Library practice	1	⅔	Hoticulture (general)	4	2⅔
Plant propagation	4	2⅔	Plane trigonometry	2	1⅓
Farm crops	3	2	Surveying	2	1⅓
Military drill	6	4	Military drill	6	4
Total	67	44⅔	Total	72	48

JUNIOR YEAR.			SENIOR YEAR.		
Plant physiology	4	2⅔	Entomology	4	2⅔
Plant pathology	4	2⅔	Bacteriology (general)	4	2⅔
Physics (elementary)	10	6⅔	Soil biology	5	3⅓
Genetics (general)	5	3⅓	Farm management	5	3⅓
Political economy	4	2⅔	Methods of investment	4	2⅔
Rural economics	4	2⅔	Thesis	6	4
Soil fertility	8	5⅓	Genetics (general)	5	3⅓
English literature	4	2⅔	Elective (free)	10	6⅔
Total	43	28⅔	Total	43	28⅔

OHIO STATE UNIVERSITY.

The following outline shows a tentative schedule for a student specializing in farm crops. Selected courses are included in the sophomore, junior, and senior years to meet the prescribed electives and in the last two years to satisfy the major requirements.

[Subjects followed by asterisk (*) not absolutely required.]

FRESHMAN YEAR.	University credits.	Semester-hours (2-hr. lab. basis).	SOPHOMORE YEAR.	University credits.	Semester-hours (2-hr. lab basis).
Chemistry (general)	8	10	Chemistry (agricultural)	5	6
Zoology (general)	6	6	Botany (general)	8	9
English composition	4	4	Soils (elementary)	5	6
Mathematics	3	3	Field crops (production)*	4	4
Drawing (mechanical)	2	2½	Entomology (economic)*	3	3
Shopwork	4	5	Geology (glacial)*	3	3
Physics	3	3	Military drill	2	2
Geology	3	3	Elective (free)	6	7
Survey of agriculture	1	1			
Physical education (gymnastic)	2	2			
Hygiene	0	1			
Military drill	2	2			
Total	38	42½	Total	36	40
JUNIOR YEAR.			**SENIOR YEAR.**		
Economics	6	6	Horticulture (farm)*	4	4
Farm engineering*	4	4	Farm management*	4	4
Live stock (types)*	4	4	Crop production (advanced)*	6	7
Dairying*	4	4	Seminar (farm practice)	2	2
Entomology (economic)*	3	3	Elective (free)	10	11
Cereal crops	2	2	Elective (limited)	8	9
Forage crops	2	2			
Field crop improvement	3	4			
Seminar (farm practice)	2	2			
Elective (free)	4	4½			
Total	34	35½	Total	34	37

OKLAHOMA AGRICULTURAL AND MECHANICAL COLLEGE.

FRESHMAN YEAR.	College credits.	Semester-hours (2 hr. lab. basis).	SOPHOMORE YEAR.	College credits.	Semester-hours (2-hr. lab. basis).
Composition	6	6	News writing (English)	2	2
Chemistry (inorganic)	7⅔	9	Chemistry (qualitative)	2	2½
Botany (general)	6⅔	8	Chemistry (quantitative)	4	5
Farm mechanics	2½	3	Chemistry (organic)	3	3½
Dairying	3⅓	3	Fruit growing	2⅔	3
Live stock (types)	3	3½	Live stock (breeds)	3⅓	4
Vegetable gardening	2⅔	3	Cereal crops	3⅓	4
Public speaking	1⅓	2	Forage crops	2⅔	3
Physical training	2	3	Plant physiology	2⅔	3
Military science	2	3	Bacteriology	3⅓	4
			Zoology (general)	3⅓	4
			Military science	2	3
Total	37⅔	43½	Total	34½	41
JUNIOR YEAR.			**SENIOR YEAR.**		
Farm motors	3½	4	Farm crops (advanced)	3½	4
Farm structures	2½	3	Farm management	3⅓	4
Cotton production	2⅔	3	Farm accounts	1⅔	2
Genetics	2	2	Crop improvement	2½	3
Plant breeding	2	2	Seminar	2	2
Soils	3½	4	Agriculture (general)	3	3½
Soil fertility	5	6	Agricultural education	2	2
Entomology	3⅓	4	Thesis	4	4
Animal nutrition	3	3	Elective (free)	9	11
Poultry	2	2			
Basic organization	3	3			
Total	32½	36	Total	30⅔	5½3

OREGON AGRICULTURAL COLLEGE.

FRESHMAN YEAR.	College credits.	Semester-hours (2-hr. lab. basis).	SOPHOMORE YEAR.	College credits.	Semester-hours (2-hr. lab. basis).
English prose	6	6	Farm accounts	2	2
Chemistry (general)	6	8	Economic zoology	6	7
Physics (general)	3	4	Agricultural chemistry	6	8
Botany (agricultural)	6	7½	Bacteriology	3	3
Crop production	3	3½	Fruit growing	2	3
Stock judging	2	3	Landscape gardening	1½	1½
Stock management	3	3	Vegetable growing	1½	1½
Farm surveying	2	2	Soils	6	8
Library practice	½	½	Dairying (elements)	3	3
Hygiene	½	½	Poultry keeping	2	2
Physical education	1	2	Physical education	1	2
Military drill	2	4	Military drill	2	4
Total	35	44½	Total	36	45
JUNIOR YEAR.			**SENIOR YEAR.**		
Agricultural economics	3	3	National government	3	3
Plant chemistry	2	2	State and municipal government	3	3
Agricultural bacteriology	3	3	Agrostology	3	3
Plant pathology	2	3	Forage crops	2	2
Diseases of field crops	1	1	Soil fertility	3	3
Entomology	2	3	Farm management	3	3
Cereal crops	4	5	Crop breeding	2	2
Land drainage	3	3½	Crop work	2	2
Crop improvement	3	3½	Feeds and feeding	3	3
Soil physics	4	5	Potato growing	1	1
Military drill	2	4	Elective (approved)	6	7
Military science	2	2			
Elective (free)	3	3			
Total	34	41	Total	31	32

PENNSYLVANIA STATE COLLEGE.

[Subjects followed by asterisk (*) not absolutely required.]

FRESHMAN YEAR.	College credits.	Semester-hours (2-hr. lab. basis).	SOPHOMORE YEAR.	College credits.	Semester-hours (2-hr. lab. basis)
Botany (general)	9	9	Bacteriology (agricultural)	3	3
Live stock (breeds)	3	3	Chemistry (organic)	2	2
Modern language	6	6	Chemistry (qualitative)	2½	3
Algebra	2	2	Chemistry (agricultural)	5	5
Trigonometry (plane)	3	3	Soils	4	4
Composition	3	3	Genetics (general)	2	2
Argumentation	3	3	Modern language	6	6
Chemistry (general)	6	6½	Geology	3	3½
Dairying	2	2	Plant propagation	3	3
Military drill	1	2½	Composition	6	6
Military tactics	1	1	Physics	3	3½
Gymnasium drill	1	1	Military drill	1	2½
			Gymnasium drill	1	1
Total	40	42	Total	41½	44½
JUNIOR YEAR.			**SENIOR YEAR.**		
Farm crops	6	6	Farm management	6	6
Soils	4	5	Crop production	3	3
Soil fertility	3	3	Seminar	2	2
Farm machinery	3	3½	Farm structures	3	3
History (American economic)	6	6	Stock judging*	2	2
Chemistry (agricultural)*	5	6	Vegetable gardening*	3	3
Zoology (general)	3½	3½	Dairy cattle*	4	4
Entomology (general)	4	4½	Economics	6	6
Plant breeding	2	2	Elective (free)	7	8
Farm practice (seminar)	6	6			
Total	42½	45½	Total	36	37

UNIVERSITY OF PORTO RICO.

The following represents the required work of the curriculum in general agriculture:

[Subjects followed by asterisk (*) not absolutely required.]

FRESHMAN YEAR.	Semester-hours.	SOPHOMORE YEAR.	Semester-hours.
English composition	6	Entomology	4
Animal husbandry	6	Botany	6
Agronomy	6	Breeds of animals	3
Elementary horticulture	6	Animal breeding	3
Pedagogy *	6	Field crops	6
Farm mechanics	6	Agricultural chemistry	8
Entomology (general)	4	Horticulture	6
Military science	3	Soils	4
		Military science	3
Total	43	Total	43

JUNIOR YEAR.		SENIOR YEAR.	
Farm machinery	6	Vegetable pathology	2
Tropical crops	6	Tropical crops	18
Horticulture	8	Bacteriology	4
Animal feeding	3	Thesis	3
Live stock judging	3	Elective	13
Farm management	3	Military science	3
Political economy	3		
Commercial law	3		
Elective	3		
Military science	3		
Total	41	Total	43

RHODE ISLAND STATE COLLEGE.

The following represents the work required for the animal husbandry option:

[Subjects followed by asterisk (*) not absolutely required.]

FRESHMAN YEAR.	Semester-hours.	SOPHOMORE YEAR.	Semester-hours.
Rhetoric and composition	6	Newspaper work	1
Modern language *	6	Argumentation	2
Algebra	2½	Public speaking	1
Trigonometry	2½	Modern language *	6
Chemistry (general)	8	Chemistry (organic)	4
Botany (general)	6	Chemistry (agricultural)	4
Plant propagation	2	Physics	5
Drawing (freehand)	1	Botany (agricultural)	3
How to study	½	Zoology (general)	8
Live stock (breeds)	4	Surveying	3
Spraying and pruning	2	Geology	2
Vegetable gardening	2	Forage crops	2
Military drill	2	Military drill	2
Military tactics	1	Military tactics	1
Total	45½	Total	44

JUNIOR YEAR.		SENIOR YEAR.	
Modern essays	4	Political economy	2½
Debating	2	Civil government	2½
History (industrial)	4	Shakespeare	2½
Veterinary practice	3	Public speaking	2
Poultry	1	Agricultural experimentation	3
Soils and fertilizers	5½	Plant breeding	3
Farm crops	4	Bacteriology	6
Farm management	2	Stock feeding	3
Fruit culture	2	Stock breeding	3
Landscape gardening	3	Elective (free)	16
Dairying	3	Military drill	2
Farm machinery	3	Military tactics	1
Elective (free)	3		
Military drill	2		
Military tactics	1		
Total	42½	Total	47

CLEMSON COLLEGE.

FRESHMAN YEAR.	College credits.	Term-hours.	Semester hours.	SOPHOMORE YEAR.	College credits.	Term-hours.	Semester hours.
Geometry	10	10	6⅔	Trigonometry	5	5	3⅓
Algebra	5	5	3⅓	Composition and rhetoric	6	6	4
Composition and rhetoric	15	15	10	American literature	3	3	2
History	9	9	6	Physics	13	11	7⅓
Agriculture (general)	6	6	4	Chemistry (general)	16	12½	8⅓
Shopwork	12	6	4	Surveying	6	4½	3
Drawing	12	6	4	Zoology	11	7	4⅔
Botany (general)	8	4	2⅔	Entomology	5	4	2⅔
Bookkeeping	4	2	1⅓	Plant pathology	5	3	2
Military drill	9	4½	3	Plant physiology	5	3	2
				Farm machinery	4	3	2
				Geology	2	1	⅔
				Military drill	9	4½	3
Total	90	67½	45	Total	90	67½	45

JUNIOR YEAR.				SENIOR YEAR.			
English literature	6	6	4	English literature	6	6	4
History (American)	6	6	4	Economics	6	6	4
Chemistry (organic)	4	4	2⅔	Geology	6	6	4
Chemistry (agricultural)	2	2	1⅓	Bacteriology	6	4	2⅔
Chemistry (quantitative)	9	4½	3	Common crops	4	3	2
Soils	8	6	4	Small grains	4	3	2
Forage crops	2	2	1⅓	Cotton	4	3	2
Cotton grading	2	1	⅔	Plant breeding	2	2	1⅓
Veterinary anatomy and physiology	10	8	5⅓	Farm motors	5	3	2
Pomology	4	3	2	Drainage	4	3	2
Vegetable gardening	4	3	2	Farm management	9	7	4⅔
Entomology	2	1	⅔	Truck farming	4	3	2
Live stock (breeds)	7	5½	3⅔	Pomology	4	3	2
Dairying	10	7	4⅔	Animal feeding	4	3	2
Forestry	2	1	⅔	Botany (taxinomic)	5	3	2
Military tactics	3	3	2	Entomology (economic)	2	2	1⅓
Military drill	9	4½	3	Plant diseases	2	1	⅔
				Poultry	2	1	⅔
				Teaching agriculture	2	1	⅔
				Military drill	9	4½	3
Total	90	67½	45	Total	90	67½	45

SOUTH DAKOTA STATE COLLEGE.

FRESHMAN YEAR.	College credits.	Semester-hours. 2 hour lab. basis.	SOPHOMORE YEAR.	College credits.	Semester-hours. 2 hour lab. basis.
Rhetoric	6	6	Botany (general)	8	10
Chemistry (elementary)	8	15	Chemistry (qualitative)	3	4
Farm crops	4	5	Chemistry (organic)	4	3⅓
Stock judging	3	4	Veterinary anatomy	2	2
Farm dairying	3	3	Extempore speaking	2	2
Breeds of live stock	3	3	Entomology	5	10
Modern language	8	8	Horticulture (general)	2	2
Military tactics	2	3	Modern language	8	8
			Military science	1	1
			Military tactics	2	3
Total	37	47	Total	37	45½

JUNIOR YEAR.			SENIOR YEAR.		
Zoology (general)	8	10	Economics	3	3
Soils	4	6	Rural economics	3	3
Soil fertility	4	6	Heredity	3	3
Farm crops	4	5	Geology (agricultural)	5	5
Psychology	3	3	Elective (free)	20	24
English literature	6	6			
Elective (free)	9	11			
Total	38	47	Total	34	38

UNIVERSITY OF TENNESSEE.

The following outline includes, in addition to the prescribed work, four courses to meet major requirements:

[Subject followed by asterisk (*) not absolutely required.]

FRESHMAN YEAR.	Semester-hours.	SOPHOMORE YEAR.	Semester-hours.
Rhetoric and composition	3	Modern language	6
American literature	3	Chemistry (inorganic)	3
Mathematics	6	Chemistry (qualitative)	3
Modern language	6	Botany (agricultural)	3
Botany (general)	6	Heredity	3
Zoology (general)	6	Live stock (breeds)	3
Farm study (practice)	2	Live stock (management)	2
Military drill	5	Pomology	3
		Dairying	3
		Soil fertility	3
		Military drill	5
Total	37	Total	37

JUNIOR YEAR.		SENIOR YEAR.	
English literature	6	Animal breeding	3
Chemistry (quantitative)	3	Plant pathology	3
Chemistry (organic)	3	Economics	3
Geology	3	Economics (agricultural)	3
Bacteriology	3	Farm crops (advanced) *	6
Veterinary anatomy	3	Soil fertility *	6
Animal diseases	3	Plant breeding *	3
Forage and fiber crops	3	Economic entomology *	3
Cereal crops	3		
Animal nutrition	3		
Stock judging	3		
Total	36	Total	30

AGRICULTURAL AND MECHANICAL COLLEGE OF TEXAS.

[Subject followed by asterisk (*) not absolutely required.]

FRESHMAN YEAR.	Semester-hours.	SOPHOMORE YEAR.	Semester-hours.
Crop production	3	Live stock (breeds)	3
Live stock (types)	4	Poultry	2
Botany (general)	8	Zoology	6
Chemistry (inorganic)	8	Chemistry (organic)	4
Rhetoric and composition	6	Geology	3
Dairying	3	English literature	6
Physics	6	Horticulture (general)	4
Military science	2	Vegetable gardening	3
Military drill	2	Veterinary practice	6
		Military drill	2
		Military science	2
Total	42	Total	41

JUNIOR YEAR.		SENIOR YEAR.	
Soils	5	Economics	3
Farm crops	5	Economics (rural)	3
Chemistry (analytical)	3	Public speaking	2
Chemistry (agricultural)	3	Plant breeding	4
Argumentation	2	Soils (advanced)	3
Farm machinery *	3	Soil fertility	3
Drainage	3	Marketing	4
Surveying	5	Animal nutrition	4
Soil mapping *	3	Farm management	5
Entomology (systematic)	3	Farm management (advanced) *	3
Entomology (economic)	3	Cost accounting *	3
Military drill	2	Military drill	2
Total	40	Total	39

AGRICULTURAL COLLEGE OF UTAH.

Students are required to complete the work of the following groups: Major subject, 16 hours; minor subject, 12 hours; biological science, 12 hours; exact science, 24 hours; language (English or foreign), 16 hours; social science, 12 hours; military science, 12 hours; free electives, 28 hours. The following outline has been prepared to meet these requirements and represents the work of a student specializing in agronomy.

FRESHMAN YEAR.	College credits.	Semester-hours. (2-hr. lab. basis).	SOPHOMORE YEAR.	College credits.	Semester-hours. (2-hr. lab. basis.)
Rhetoric	4	4	Modern language	6	6
Modern language	6	6	Chemistry (organic)	3	3
Chemistry (inorganic)	10	12	Geology (economic)	3	3
Cereal crops	3	3½	Botany (general)	8	9
Forage crops	3	3½	Soils	6	6½
Military drill	2	3	Military drill	2	3
Military science	2	2	Military science	2	2
Elective (free)	4	4½	Elective (free)	4	4½
Total	34	38	Total	34	37

JUNIOR YEAR.			SENIOR YEAR.		
Marketing	6	6	Economics	6	6
Physics	8	8	Seminar	2	2½
Bacteriology	4	4½	Soil bacteriology	3	3½
Soils (comparative)	2	2½	Economic entomology	3	3
Elements of dairying	3	3½	Plant pathology	3	3½
Military drill	2	3	Elective (free)	13	15
Military science	2	2			
Elective (free)	7	8½			
Total	34	37½	Total	30	33½

UNIVERSITY OF VERMONT.

The following represents the work required for the curriculum in animal industry.

[Subjects followed by asterisk (*) not absolutely required.]

FRESHMAN YEAR.	Semester hours.	SOPHOMORE YEAR.	Semester hours.
Trigonometry	4	Botany (general)	8
Analytical geometry	4	Zoology (agricultural)	6
Chemistry (general)	10	English literature	4
Rhetoric and composition	4	Soils	6
Modern language	6	Stock feeding	3
Dairying	2	Live stock (breeds)	2
Botany (general)	4	Olericulture	3
Drawing and surveying	2	Forestry	2
Physical training (gymnastics)	1	Physical training (gymnastics)	1
Military science	4	Military science	4
Total	41	Total	39

JUNIOR YEAR.		SENIOR YEAR.	
Anatomy of domestic animals	2	Milk production	3
Physiology, etc., of domestic animals	4	Diseases of domestic animals	3
Field crops	3	Poultry husbandry	6
Farm management	3	Farm management	3
Bacteriology	3	Farm mechanics	3
Pomology	3	Pomology	3
Dairy manufactures	3	Rural economics	3
Stock judging	3	Forging	3
General electrical engineering	3	Agricultural chemistry*	3
Stock breeding	3	Commercial law*	3
Argumentation	3	Economics*	3
English literature	3		
Total	36	Total	36

VIRGINIA POLYTECHNIC INSTITUTE.

The following represents the work required for the curriculum in general agriculture.

[Subjects followed by asterisk (*) not absolutely required.]

FRESHMAN YEAR.	College credits (hours per week).	Semester-hours.
Rhetoric	9	6
Modern language	9	6
Algebra	6	4
Geometry	6	4
Trigonometry	6	4
Physics	9	6
Physics laboratory	7½	2½
Chemistry (inorganic)	9	6
Chemistry laboratory	7½	2½
Drawing (mechanical)	7½	2½
Drawing (freehand)	7½	2½
Shopwork	15	5
Military training	18	6
Total	117	57

SOPHOMORE YEAR.	College credits.	Semester-hours.
Rhetoric	9	6
Modern language	9	6
Drainage	3	2
Farm machinery	3	2
Cost accounting	3	2
Orchard technique	7½	2½
Chemistry (inorganic)	9	6
Qualitative analysis	7½	2½
Surveying	3	2
Surveying (practical)	6	2
Live stock (breeds)	6	4
Live stock judging	9	3
Veterinary anatomy, etc	6	4
Horticulture (principal)	3	2
Botany (structural)	6	2
Botany (systematic)	6	2
Farm buildings	3	1
Military training	18	6
Total	117	57

JUNIOR YEAR.		
English literature	9	6
Modern language	9	6
Chemistry (organic)	9	6
Plant pathology	6	4
Farm crops	3	2
Farm crops laboratory	9	3
Animal parasites	3	2
Zoology	6	4
Animal breeding	6	4
Soil physics	3	2
Soil physics laboratory	6	2
Quantitative analysis	9	3
Entomology	9	3
Plant histology	6	2
Dairy products (testing)	6	2
Military training	18	6
Total	117	57

SENIOR YEAR.		
Economics	6	4
Farm management	3	2
Chemistry (agricultural)	9	6
Geology (general)*	6	4
Geology laboratory*	3	1
Vegetable physiology	3	2
Genetics	6	4
Bacteriology (general)	3	2
Bacteriology (laboratory)	15	5
Animal nutrition	6	4
Live stock management	3	2
Animal diseases	9	6
Veterinary clinic	9	3
Dairy technology	6	2
Butter making	6	2
Cheese making	6	2
Military training	18	6
Total	117	57

STATE COLLEGE OF WASHINGTON.

[Subjects followed by asterisk (*) not absolutely required.]

FRESHMAN YEAR.	Semester-hours.	SOPHOMORE YEAR.	Semester-hours.
Field crops	5	Fruit growing	2
Live stock (types)	5	Soil physics	4
Rhetoric and composition	3	Soil fertility	3
English literature	3	Farm machinery	4
Chemistry (inorganic)	5	Chemistry (organic)	5
Chemistry (qualitative)	5	Bacteriology	5
Physics	6	Dairying	3
Zoology	2	Botany (general)	5
Geology	2	Plant pathology	3
Library practice	½	Rhetoric and composition	4
Military drill	2	Physical culture	1
Physical culture	1	Military drill	2
Total	39½	Total	41
JUNIOR YEAR.		**SENIOR YEAR.**	
Modern language	10	Modern language	10
Cereal crops	3	Economics	5
Principles of feeding	3	Farm management	3
Principles of breeding (plant or animal)	2	Elective (limited)	7
Poultry husbandry	3	Elective (free)	11½
Rural economics*	5		
Elective (limited)	9		
Elective (free)	2		
Total	37	Total	36½

WEST VIRGINIA UNIVERSITY.

In addition to the prescribed work, several courses that have been suggested by the major department have been included in the schedule for the junior and senior years.

FRESHMAN YEAR.	University credits.	Semester hours (2-hr. lab. basis).	SOPHOMORE YEAR.	University credits.	Semester hours (2-hr. lab. basis).
Chemistry (organic)	8	9	Zoology	4	4½
Botany (general)	8	9	Physics	8	8
Live stock (breeds)	3	3½	Live stock (management)	3	3
Vegetable gardening	3	3½	Dairying	3	3½
Farm management (elementary)	1	1	Poultry	3	3½
Agriculture (general)	1	1	Pomology	3	3½
Rhetoric and composition	6	6	Farm crops	4	4½
English literature	4	4	Soil fertility	4	5
Military science	2	4	Entomology	4	4½
			Military science	2	4
Total	36	41	Total	38	44
JUNIOR YEAR.			**SENIOR YEAR.**		
Economics	3	3	Sociology	4	4
Bacteriology	3	3½	Farm management	3	3
Chemistry (organic)	3	3½	Plant breeding*	3	3
Farm management	3	3	Seminar	2	2
History (economic)	3	3	Soil chemistry*	3	3½
Forage crops*	3	3½	Soil bacteriology*	3	3½
Plant physiology*	6	7	Farm machinery*	2	3
Entomology (economic)*	3	3½	Elective	14	16
Grain growing*	3	3½			
Soil fertility*	2	2			
Elective (free)	4	4½			
Total	36	40	Total	34	38

UNIVERSITY OF WISCONSIN.

The following outline represents the required work for students entering the university without modern language. A separate schedule is offered for those who present modern language upon admission. In addition to the generally prescribed work the schedule presented here includes eight courses to meet the major and minor requirements in the senior year.

[Subjects followed by asterisk (*) not absolutely required.]

FRESHMAN YEAR.	Semester hours.	SOPHOMORE YEAR.	Semester hours.
English composition	6	Chemistry (quantitative)	3
Modern language	8	Chemistry (organic)	2
Chemistry (general)	10	Chemistry (agricultural)	5
Cereals	2½	Bacteriology (agricultural)	5
Agricultural engineering	2½	Botany (general)	5
Stock judging	2½	Fruit growing	2
Dairying	2½	Mathematics	5
Physical education (gymnastics)	2	Soils (physics and fertility)	5
Military drill	2	Zoology (general)	3
		Physical education (gymnastics)	2
		Military drill	2
Total	38	Total	40

JUNIOR YEAR.		SENIOR YEAR.	
Botany (economic)	2	Major:	
Plant physiology	4	Plant breeding*	3
Live stock management	2	Grasses*	2
Economics (agricultural)	5	Cereals*	4
Physics	6	Agronomy (problems)*	1
Elective (limited)	10	Minor:	
Elective (free)	5	Land drainage*	3
		Soil management*	2
		Plant nutrition*	3
		Field management*	2
		Elective (limited)	2
		Elective (free)	9
Total	34	Total	31

UNIVERSITY OF WYOMING.

The following outline shows the distribution of the work of the agronomy and general agriculture curriculum. In the junior year three selected agricultural courses have been included to satisfy the limited elective work.

[Subjects followed by asterisk (*) not absolutely required.]

FRESHMAN YEAR.	University credits.	Semester hours (2-hr. lab. basis).	SOPHOMORE YEAR.	University credits.	Semester hours (2-hr. lab. basis).
Composition	6	6	Chemistry (inorganic)	8	10
Botany (general)	10	10	Surveying	2	3
Cereal crops	3	4	Irrigation	2	3
Forage crops	3	4	Farm machinery	4	6
Algebra	5	5	Live stock (breeds)	6	6
Trigonometry	5	5	Bacteriology	4	5
Military drill	1	3	Animal diseases	3	3
			Elective (free)	2	2
			Military drill	1	3
Total	33	37	Total	32	41
JUNIOR YEAR.			**SENIOR YEAR.**		
Chemistry (qualitative)	3	4	Chemistry (organic)	5	5
Chemistry (quantitative)	3	4	Chemistry (agricultural)	4	5
Soils	3	4	Farm management	2	2
Soil fertility	3	4	Plant breeding	2	2
Vegetable gardening*	2	2	Plant histology	3	3½
Animal feeding*	5	5	Elective (approved)	14	16½
Plant diseases*	3	3½			
Elective (approved)	8	9½			
Military drill	1	3			
Total	31	39	Total	30	34

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UNIVERSITY OF WISCONSIN.

The following outline represents the required work for students entering the university without modern language. A separate schedule is offered for those who present modern language upon admission. In addition to the generally prescribed work the schedule presented here includes eight courses to meet the major and minor requirements in the senior year.

[Subjects followed by asterisk (*) not absolutely required.]

FRESHMAN YEAR.	Semester hours.	SOPHOMORE YEAR.	Semester hours.
English composition	6	Chemistry (quantitative)	3
Modern language	8	Chemistry (organic)	2
Chemistry (general)	10	Chemistry (agricultural)	5
Cereals	2½	Bacteriology (agricultural)	5
Agricultural engineering	2½	Botany (general)	5
Stock judging	2½	Fruit growing	3
Dairying	2½	Mathematics	5
Physical education (gymnastics)	2	Soils (physics and fertility)	5
Military drill	2	Zoology (general)	3
		Physical education (gymnastics)	2
		Military drill	2
Total	38	Total	40

JUNIOR YEAR.		SENIOR YEAR.	
Botany (economic)	2	Major:	
Plant physiology	4	Plant breeding*	3
Live stock management	2	Grasses*	2
Economics (agricultural)	5	Cereals*	4
Physics	6	Agronomy (problems)*	1
Elective (limited)	10	Minor:	
Elective (free)	5	Land drainage*	3
		Soil management*	2
		Plant nutrition*	3
		Field management*	2
		Elective (limited)	2
		Elective (free)	9
Total	34	Total	31

UNIVERSITY OF WYOMING.

The following outline shows the distribution of the work of the agronomy and general agriculture curriculum. In the junior year three selected agricultural courses have been included to satisfy the limited elective work.

[Subjects followed by asterisk (*) not absolutely required.]

FRESHMAN YEAR.	University credits.	Semester hours (2-hr. lab. basis).	SOPHOMORE YEAR.	University credits.	Semester hours (2-hr. lab. basis).
Composition	6	6	Chemistry (inorganic)	8	10
Botany (general)	10	10	Surveying	2	3
Cereal crops	3	4	Irrigation	2	3
Forage crops	3	4	Farm machinery	4	6
Algebra	5	5	Live stock (breeds)	6	6
Trigonometry	5	5	Bacteriology	4	5
Military drill	1	3	Animal diseases	3	3
			Elective (free)	2	2
			Military drill	1	3
Total	33	37	Total	32	41

JUNIOR YEAR.			SENIOR YEAR.		
Chemistry (qualitative)	3	4	Chemistry (organic)	5	5
Chemistry (quantitative)	3	4	Chemistry (agricultural)	4	5
Soils	3	4	Farm management	2	2
Soil fertility	3	4	Plant breeding	2	2
Vegetable gardening*	2	2	Plant histology	3	3½
Animal feeding*	5	5	Elective (approved)	14	16½
Plant diseases*	3	3½			
Elective (approved)	8	9½			
Military drill	1	3			
Total	31	39	Total	30	34

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BULLETIN OF THE BUREAU OF EDUCATION FOR 1918.

No. 1. Monthly record of current educational publications, January, 1918.
No. 2. Guide to United States Government publications. W. I. Swanton.
No. 3. Agricultural instruction in the high schools of six eastern States. C. Lane.
No. 4. Monthly record of current educational publications, February, 1918.
No. 5. Work of the Bureau of Education for the natives of Alaska, 1916–17.
No. 6. The curriculum of the woman's college. Mabel L. Robinson.
No. 7. The bureau of extension of the University of North Carolina. Louis Wilson and Lester A. Williams.
No. 8. Monthly record of current educational publications, March, 1918.
No. 9. Union list of mathematical periodicals. David E. Smith.
No. 10. Public school classes for crippled children. Edith R. Solenberger.
No. 11. A community center—what it is and how to organize it. Henry E. Jackson
No. 12. Monthly record of current educational publications, April, 1918.
No. 13. The land grant of 1862 and the land-grant colleges. Benj. F. Andrews.
No. 14. Monthly record of current educational publications, May, 1918.
No. 15. Educational survey of Elyria, Ohio.
No. 16. Facilidades Ofrecidas a Los Estudiantes Extranjeros.
No. 17. History of public school education in Arizona. Stephen B. Weeks.
No. 18. Americanization as a war measure.
No. 19. Vocational guidance in secondary education. A report of the Commission on Secondary Education.
No. 20. Monthly record of current educational publications, June, 1918.
No. 21. Instruction in journalism in institutions of higher education. James M. Lee.
No. 22. Monthly record of current educational publications—Index, February, 1917, to January, 1918.
No. 23. State laws relating to education enacted in 1915, 1916, and 1917. William R. Hood.
No. 24. Vocational guidance and the public schools. W. Carson Ryan, jr.
No. 25. Industrial education in Wilmington, Del.
No. 26. The National Council of Primary Education.
No. 27. Rural teacher preparation in State normal schools. Ernest Burnham.
No. 28. The public schools of Columbia, S. C.
No. 29. American agricultural colleges. Chester D. Jarvis.
No. 30. Resources and standards of colleges of arts and sciences.
No. 31. The educational system of South Dakota.
No. 32. Teaching American ideals through literature. Henry Neumann.
No. 33. Monthly record of current educational publications, September, 1918.
No. 34. Monthly record of current educational publications, October, 1918.
No. 35. Cardinal principles of secondary education. A report of the Commission on Secondary Education.
No. 36. Educational directory, 1918–19.

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DEPARTMENT OF THE INTERIOR
BUREAU OF EDUCATION

BULLETIN, 1918, No. 30

RESOURCES AND STANDARDS
of
COLLEGES OF ARTS AND SCIENCES

REPORT OF A COMMITTEE
REPRESENTING THE ASSOCIATIONS OF
HIGHER EDUCATIONAL INSTITUTIONS

Prepared by
SAMUEL PAUL CAPEN
SECRETARY

WASHINGTON
GOVERNMENT PRINTING OFFICE
1918

VIRGINIA POLYTECHNIC INSTITUTE.

The following represents the work required for the curriculum in general agriculture.

[Subjects followed by asterisk (*) not absolutely required.]

FRESHMAN YEAR.	College credits (hours per week).	Semester-hours.	SOPHOMORE YEAR.	College credits.	Semester-hours.
Rhetoric	9	6	Rhetoric	9	6
Modern language	9	6	Modern language	9	6
Algebra	6	4	Drainage	3	2
Geometry	6	4	Farm machinery	3	2
Trigonometry	6	4	Cost accounting	3	2
Physics	9	6	Orchard technique	7½	2½
Physics laboratory	7½	2½	Chemistry (inorganic)	9	6
Chemistry (inorganic)	9	6	Qualitative analysis	7½	2½
Chemistry laboratory	7½	2½	Surveying	3	2
Drawing (mechanical)	7½	2½	Surveying (practical)	6	2
Drawing (freehand)	7½	2½	Live stock (breeds)	6	4
Shopwork	15	5	Live stock judging	9	3
Military training	18	6	Veterinary anatomy, etc	6	4
			Horticulture (principal)	3	2
			Botany (structural)	6	2
			Botany (systematic)	6	2
			Farm buildings	3	1
			Military training	18	6
Total	117	57	Total	117	57

JUNIOR YEAR.			SENIOR YEAR.		
English literature	9	6	Economics	6	4
Modern language	9	6	Farm management	3	2
Chemistry (organic)	9	6	Chemistry (agricultural)	9	6
Plant pathology	6	4	Geology (general)*	6	4
Farm crops	3	2	Geology laboratory*	3	1
Farm crops laboratory	9	3	Vegetable physiology	3	2
Animal parasites	3	2	Genetics	6	4
Zoology	6	4	Bacteriology (general)	3	2
Animal breeding	6	4	Bacteriology (laboratory)	15	5
Soil physics	3	2	Animal nutrition	6	4
Soil physics laboratory	6	2	Live stock management	3	2
Quantitative analysis	9	3	Animal diseases	9	6
Entomology	9	3	Veterinary clinic	9	3
Plant histology	6	2	Dairy technology	6	2
Dairy products (testing)	6	2	Butter making	6	2
Military training	18	6	Cheese making	6	2
			Military training	18	6
Total	117	57	Total	117	57

STATE COLLEGE OF WASHINGTON.

[Subjects followed by asterisk (*) not absolutely required.]

FRESHMAN YEAR.	Semester-hours.	SOPHOMORE YEAR.	Semester-hours.
Field crops	5	Fruit growing	2
Live stock (types)	5	Soil physics	4
Rhetoric and composition	3	Soil fertility	3
English literature	3	Farm machinery	4
Chemistry (inorganic)	5	Chemistry (organic)	5
Chemistry (qualitative)	5	Bacteriology	5
Physics	6	Dairying	3
Zoology	2	Botany (general)	5
Geology	2	Plant pathology	3
Library practice	½	Rhetoric and composition	4
Military drill	2	Physical culture	1
Physical culture	1	Military drill	2
Total	39½	Total	41
JUNIOR YEAR.		**SENIOR YEAR.**	
Modern language	10	Modern language	10
Cereal crops	3	Economics	5
Principles of feeding	3	Farm management	3
Principles of breeding (plant or animal)	2	Elective (limited)	7
Poultry husbandry	3	Elective (free)	11½
Rural economics*	5		
Elective (limited)	9		
Elective (free)	2		
Total	37	Total	36½

WEST VIRGINIA UNIVERSITY.

In addition to the prescribed work, several courses that have been suggested by the major department have been included in the schedule for the junior and senior years.

FRESHMAN YEAR.	University credits.	Semester hours (2-hr. lab. basis).	SOPHOMORE YEAR.	University credits.	Semester hours (2-hr. lab. basis).
Chemistry (organic)	8	9	Zoology	4	4½
Botany (general)	8	9	Physics	8	8
Live stock (breeds)	3	3½	Live stock (management)	3	3
Vegetable gardening	3	3½	Dairying	3	3½
Farm management (elementary)	1	1	Poultry	3	3½
Agriculture (general)	1	1	Pomology	3	3½
Rhetoric and composition	6	6	Farm crops	4	4½
English literature	4	4	Soil fertility	4	5
Military science	2	4	Entomology	4	4½
			Military science	2	4
Total	36	41	Total	38	44
JUNIOR YEAR.			**SENIOR YEAR.**		
Economics	3	3	Sociology	4	4
Bacteriology	3	3½	Farm management	3	3
Chemistry (organic)	3	3½	Plant breeding*	3	3
Farm management	3	3	Seminar	2	2
History (economic)	3	3	Soil chemistry*	3	3½
Forage crops*	3	3½	Soil bacteriology*	3	3½
Plant physiology*	6	7	Farm machinery*	2	3
Entomology (economic)*	3	3½	Elective	14	16
Grain growing*	3	3½			
Soil fertility*	2	2			
Elective (free)	4	4½			
Total	36	40	Total	34	38

LETTER OF TRANSMITTAL.

DEPARTMENT OF THE INTERIOR,
BUREAU OF EDUCATION,
Washington, August 17, 1918.

SIR: An accurate and comprehensive study of college standards and resources has been needed for many years. Such a study should help college officers in one part of the country to evaluate credentials presented by students from institutions in other parts. It should assist parents to select wisely the institutions to which they shall send their children. Above all, it should enable college authorities to compare their own institutions with others and to strive for the most necessary improvements. In 1915, the Bureau of Education secured the cooperation of a committee representing higher educational associations for the purpose of making such a study. The results are presented in the accompanying document, which has been prepared by Dr. S. P. Capen, specialist in higher education in this bureau, who acted as secretary of the committee. They are less complete than could be desired, but nevertheless I believe they will accomplish, in a measure, the object in view.

The war is likely to bring about considerable changes in colleges and universities. The effects of it on the financial status and academic policies of many institutions are already marked. As a record of the condition of a majority of the higher institutions of the country in the period immediately preceding the entry of the United States into the war, in a period which may prove to be the end of an epoch in higher education, the accompanying study is especially timely. I therefore recommend it for publication as a bulletin of the Bureau of Education.

Respectfully submitted.

P. P. CLAXTON,
Commissioner.

The SECRETARY OF THE INTERIOR.

RESOURCES AND STANDARDS OF COLLEGES OF ARTS AND SCIENCES.

REPORT OF THE COMMITTEE ON HIGHER EDUCATIONAL STATISTICS.

During the year 1914–15 the Bureau of Education organized a committee made up of representatives of the principal associations dealing with higher education for the purpose of discussing the advisability of classifying colleges and universities on a national scale and, if such classification seemed desirable, suggesting methods of procedure. The members of the committee, and the association represented by each, follow:

Prof. WALTER BALLOU JACOBS, *New England Association of Colleges and Secondary Schools.*

Commissioner JOHN H. FINLEY, *Association of Colleges and Preparatory Schools of the Middle States and Maryland.*

Prof. BERT E. YOUNG, *Association of Colleges and Secondary Schools of the Southern States.*

Prof. H. A. HOLLISTER, *North Central Association of Colleges and Secondary Schools.*

Dean R. D. SALISBURY, *Association of American Universities.*

Chancellor SAMUEL AVERY, *National Association of State Universities.*

Dr. N. P. COLWELL, *American Medical Association.*

President CHARLES S. HOWE, *Society for the Promotion of Engineering Education.*

President D. J. COWLING, *Association of American Colleges.*

The COMMISSIONER OF EDUCATION.

Dr. S. P. CAPEN, *specialist in higher education, Bureau of Education (secretary).*

Several other associations were asked to furnish representatives for this committee but declined.

The committee met at the Bureau of Education, May 3, 1915, and organized itself as a permanent committee on higher educational statistics to cooperate with the Bureau of Education in the study of the standards of higher educational institutions.

A CRITICAL STUDY OF COLLEGE AND UNIVERSITY RESOURCES.

The committee considered the attempts of the Bureau of Education in 1911 and 1912 to classify the colleges of the country with relation to the value of the bachelor's degree. It concluded that the continuance of the classification on this basis was at the present time, and in view of the resources of the Bureau of Education, not desirable. In place of this it urged the prosecution of a critical study which should show the resources and equipment and, as far

as possible, the educational and administrative efficiency of colleges and universities. Because of the essential differences in equipment, personnel, and standards exhibited by the different types of higher institutions, it was deemed wise that separate studies should be made of colleges of arts and sciences, engineering schools, schools of agriculture, schools of mines, and teachers' colleges. As representing the largest class of institutions, and also the only ones not subject to the definite test of professional competency, the committee agreed that colleges of arts and sciences should be the first object of its study.

SPECIAL INQUIRY TO COLLEGES OF ARTS AND SCIENCES.

The committee was impressed by the success of the procedure of the North Central Association of Colleges and Secondary Schools in establishing a group of categories for recording the administrative efficiency and equipment of institutions. At a meeting of this association held in March, 1914, the following 10 categories were adopted as significant of collegiate standing:

1. Number of faculty in independent charge of classes.
2. Number of faculty with degree of doctor of philosophy.
3. Number of matriculated students.
4. Number of degrees granted in course.
5. Number of elementary courses of instruction actually given.
6. Number of advanced courses.
7. Number of professional courses.
8. Expenditures for salaries.
9. Hours of class instruction required of members of the faculty.
10. Material equipment.

The committee took these categories as the basis for its inquiry. It instructed the chairman and secretary to prepare blanks to be sent to the colleges of arts and sciences of the United States which would seek information on these and the following matters:

(*a*) Admission requirements.
(*b*) Requirements for degrees.
(*c*) Endowment and income (indebtedness).
(*d*) An analysis of the advanced degrees held by members of the faculty.
(*e*) The number of students and their distribution by classes.
(*f*) The ratio of courses announced in the catalogue to those actually given.
(*g*) The annual appropriations for laboratories and libraries.

The blank prepared by the chairman and secretary was sent to members of the committee for suggestions and reported to various association meetings. As the result of these efforts, numerous modifications were made. The blank as finally approved is given below. It was issued by the committee to the institutions early in 1916.

DEPARTMENT OF THE INTERIOR.

BUREAU OF EDUCATION.

STATISTICS OF COLLEGES AND UNIVERSITIES, 1915–16.

College of Arts and Sciences.

(Do not include statistics of other departments or schools, e. g., engineering, agriculture, graduate school.)

Name of institution.....
Post office..... State.....
Legal control (by State, by city, by religious denomination, or nonsectarian).....
Name of president.....
Year in which bachelor's degree was first conferred.....

SIZE OF DIVISION.

(By "division" is meant a group of students meeting together for a regular exercise in a course. Thus, if there is one meeting of a chemistry class for lecture and this class then breaks up into laboratory divisions, the arrangement should be reported as one lecture division and so many laboratory divisions.)

Number of students in each of the five largest lecture divisions.....
Number in each of the five largest recitation divisions.....
Number in each of the five largest laboratory divisions.....
Number in each of the five smallest divisions.....
Exact average of all divisions in both laboratory and nonlaboratory subjects. (If this average can not be given exactly, it should be estimated).....
.....

DEPARTMENTS.

Underline the names of the departments in the following list in which at least the full time of one professor is devoted to college instruction to the exclusion of any other teaching: English; modern languages (or French, German) other than English; ancient languages; history; philosophy; economic, political, and social sciences; mathematics; physics; chemistry; biology (or zoology and botany); geology. (If more than one teacher gives full time to any of these subjects, specify the number. If two or more of the above subjects are taught by the same teacher, specify in detail what combinations are made.) .....
.....
.....
.....
.....
.....
.....

COLLEGE OF ARTS AND SCIENCES; PROFESSORS AND INSTRUCTORS—NUMBER, DEGREES, TEACHING HOURS, SALARIES, ETC.

Faculty (persons in independent charge of classes (not counting readers, student assistants, etc.)).	Number holding no degrees.		Number holding only bachelor's degree.[1]		Number holding master's degree[1] and none higher (excluding honorary degrees).		Number holding doctor's degree[1] (excluding honorary degrees).[2]		Number teaching more than 15 credit hours a week in nonlaboratory subjects.		Number teaching 15 credit hours a week in nonlaboratory subjects.		Number teaching more than 15 credit hours a week in laboratory subjects (3 hours laboratory instruction to be reckoned as equal to 1 hour classroom instruction).		Number teaching 15 credit hours a week in laboratory subjects (3 hours laboratory instruction to be reckoned as equal to 1 hour classroom instruction).		Average number of teaching hours for all those teaching 15 hours a week or less (3 hours laboratory instruction to be reckoned as equal to 1 hour classroom instruction).	
	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.
Professors																		
Associate professors																		
Assistant professors																		
Instructors																		
Lower ranks																		
Total																		

[1] List below the institutions from which degrees were taken:

Bachelor's.	*Master's.*	*Doctor's.*

[2] List below the number of honorary degrees and the names of the institutions granting them:

.....

.....

.....

.....

COLLEGES OF ARTS AND SCIENCES; PROFESSORS AND INSTRUCTORS—NUMBER, DEGREES, TEACHING HOURS, SALARIES, ETC.—Continued.

Average number of teaching hours per week for those having independent charge of classes.		Maximum salary.		Number drawing maximum salary of rank.		Minimum salary.		Number drawing minimum salary of rank.		Average salary of rank.		Number giving full time to college instruction.		Number giving part time to preparatory instruction.		Number[1] giving instruction in both college and department of engineering, education, or commerce.		Number[1] giving instruction in both college and graduate school.		Total number of faculty.
Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	
		$	$			$	$			$	$									

[1] This column to be filled out only by institutions having professional or graduate departments.

STUDENTS, REQUIREMENTS, DEGREES, AND COURSES.

Classes of students.	Students.			Number entering in September, 1915.		Number in each college class, 1915–16.								Number of graduates of secondary schools entering in September, 1915.		Number of A. B. and B. S. graduates of past 5 years who have taken master's degree at other institutions after—				Degrees or certificates granted in 1915 for work in course.[1]		
						Freshman.		Sophomore.		Junior.		Senior.				One year of graduate study.		Two years of graduate study.				
	Men.	Women.	Total.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	A. B.	B. S.	Other baccalaureate degrees.
Regular students																						
Conditioned students [2]																						
Special or unclassified students																						
Total college students																						
Music, art, or expression students																						
Preparatory students																						
Professional students [3]																						

Number of standard units required for admission.....

When was this number first made effective?.....

Number of standard units previously required.....

Maximum number of entrance conditions allowed.....

How soon after entrance must all entrance conditions be made up?.....

How are conditioned students rated?.....

Conditions under which special students are admitted.....

Number of semester hours required for bachelor's degree [4].....

When was this number first made effective?.....

State total number of subject courses (not counting courses duplicated [1]) announced in catalogue of 1915–16 as open to undergraduates.....

Number of these not given during academic year 1915–16.....

Number of these not given during each of past five years.....

Is the institution a junior college? (By a junior college is meant an institution offering two years' work of college grade, or at least thirty year-hours beyond the regular four years of secondary training, but not equipped for a four-year college course leading to the bachelor's degree.).....

FINANCIAL.

(Institutions in which the department of arts and sciences is only one of several departments are requested to give the proportion of the total expenditures under the following items devoted to this department. If this is impossible, give institutional expenditures and note the fact.)

Expenditures for 1914–15:

For administration, including handling of institution's funds	$.....
For educational services—	
Salaries of college teachers	.....
Salaries of teachers in other departments	.....
For increase of plant and lasting improvements	.....
For maintenance of grounds and buildings	.....
For maintenance of scientific laboratories	.....
For new materials and apparatus for scientific laboratories	.....
For maintenance of library (including librarian's salary, if that officer devotes all his time to care of the library)	.....
For purchase of new books and periodicals for library	.....
Average annual expenditure for past five years for new materials and apparatus for scientific laboratories	.....
Average annual expenditures for past five years for new books and periodicals	.....
What is the indebtedness of this institution?	.....
Is there any reason why indebtedness should not be subtracted from value of property? [5]	.....
Average annual fees per student for matriculation, library, and other educational services (excluding tuition)	.....
Average annual tuition fees	.....

[1] Please fill out this category for all except preparatory and professional students.

[2] Conditioned students are those who have been admitted to college as candidates for a degree during the current year with less than the prescribed number of entrance units.

[3] Universities and colleges having professional departments such as engineering, commerce, education, law, etc., are asked to summarize the figures for these departments under the head of professional.

[4] A semester hour is one hour a week of lecture or classroom instruction or its credit equivalent of laboratory instruction for a semester.

[5] Value of property and receipts from all sources are reported annually to this Bureau. These figures will be compared with the returns asked for on this blank.

It has evidently been very difficult for college officers to secure much of the detailed information called for in this blank. The difficulty has been most acutely felt by large institutions of complicated organization. Many of the larger universities were apparently unable to separate the data relating to their colleges of arts and sciences without an unjustifiable expenditure of time and money. Returns from nearly all institutions were slow in coming in. Of the 500 colleges addressed, 252 replied in the course of a year. This represents, approximately, 50 per cent of the colleges of arts and sciences in the country. The committee was convinced that returns had been received from a sufficient number to render the study significant and valuable. The principal items were accordingly tabulated by the Bureau of Education in a single table (Table 1). This table presents, in the committee's judgment, the fundamental facts regarding the resources and standards of colleges of arts and sciences as far as these may be recorded statistically. To the eye of the initiated the entries in this table tell their own story. A somewhat extended interpretation of them appears to be needed, however, to make the record generally clear.

SUBCOMMITTEE ON DEFINITION OF COLLEGE STANDARDS.

The committee conferred upon a subcommittee consisting of Messrs. Salisbury, Young, and Capen the task of interpretation. The subcommittee was instructed to define, if it seemed desirable, the term "college," and possibly other terms relating to the inquiry.

The subcommittee concluded that, in view of the large number of definitions which already have some currency, a formal attempt to define the term "college" would at this time tend to confuse the issue. It therefore adopted a different procedure.

It studied with care the returns as tabulated in Table 1, and on the basis of these, supplemented by the knowledge which its members had from personal contact of a large number of collegiate institutions, it formulated a group of categories which it judged to be important in estimating college standards and the vitality of collegiate institutions. It then indicated the minimum requirement under each of these categories which every institution should strive as soon as possible to attain. It has grouped the returns from the inquiry so that the standing under each of the categories of the institutions reporting is clearly exhibited. This grouping appears in Tables 2 to 13.

A further word of explanation is perhaps desirable. The committee is of the opinion that, in order to be regarded as an acceptable college, an institution may not necessarily be expected immediately to meet the minimum requirement under every one of the categories. For

example, a college might do good work "in a restricted field" with a faculty smaller than is noted under Section III below and with an income smaller than suggested in Section I below. The committee's purpose is rather to outline what may be regarded as the essential scope of a successful collegiate enterprise. With smaller resources and lower standards in any of the categories mentioned, no institution may view its situation with complacency. Due allowance is made in estimating the standing of institutions under the following categories for denominational institutions whose budgets contemplate no salaries for instructors and whose discipline precludes the separation of the college from the preparatory school. The suggested minimum requirements under 13 heads follow:

SUGGESTED REQUIREMENTS FOR A SUCCESSFUL COLLEGE OF ARTS AND SCIENCES.

I. A college of arts and sciences should have an annual income of at least $40,000. At least three-fifths of an income as small as $40,000 should be expended for salaries for teaching and administration. Exception is made of certain denominational institutions whose teaching staffs work without salaries.

II. A study of conditions at numerous substantial institutions indicates that college work of standard grade costs somewhere in the neighborhood of $200 a year per student. The minimum productive endowment for a college of arts and sciences should be $250,000. It is noted, however, that with advancing standards and prices this amount should be rapidly increased; probably twice as much will be needed in the near future to give an institution the assurance of stability. Institutions should strive to bring their endowment to the point where it will yield at least half of the money needed for annual expenses.

III. A college of arts and sciences should have as many as 11 departments, in each of which at least one teacher devotes his whole time to collegiate instruction. Some of the larger departments will require more than one instructor. The following departments are suggested: English; modern languages (or French or German or Spanish) other than English; ancient languages; history; philosophy and psychology; economic, political, and social sciences; mathematics; physics; chemistry; biology (or zoology and botany); geology, and geography. In addition it seems desirable, wherever possible, to separate the departments of Romance and Germanic languages, and some of the other groups might well be divided, especially in the larger colleges.

IV. A college of arts and sciences should have a faculty of at least 15 members devoting full time to college work.

V. If a college of arts and sciences maintains an academy or preparatory department, this department should be "distinct in students, faculty, and discipline." Exception may be made, as noted above, of certain denominational institutions whose traditions and policy require the inclusion of secondary education with collegiate education under the same institutional control. In such cases the preparatory department should be administratively separated from the college department.

VI. Members of the faculty of a college of arts and sciences should have pursued graduate study in addition to the bachelor's degree. At least one-fourth of the faculty should hold the degree of doctor of philosophy or degrees representing equivalent scholarly attainments *bestowed by reputable graduate schools.* At least three-fourths of the faculty should have secured the master's degree in course at a reputable graduate school.

VII. Fifteen hours of teaching a week should be regarded as the maximum program of a college teacher.

VIII. Fifteen or sixteen credit hours a week for each student for 36 weeks a year for four years should be regarded as the normal program of work for students.

IX. While heretofore 14 units of secondary work has been regarded as the acceptable minimum for admission to college, and at the time of the issuance of this inquiry represented the standard set by most standardizing agencies, there is now a general tendency to raise this requirement to 15 units. A college of arts and sciences should require 15 units for unconditional admission. In judging the reports of colleges appearing in this study, however, the prevailing standard of 1915 should be taken into account.

X. The maximum number of conditions allowed should not exceed two.

XI. The average salary for assistant professors in 25 colleges [1] of unquestioned standing, in Table 1, is $1,369. The average salary of professors at the same group of institutions is $2,174. Conditions of living differ, and an absolute standard can not justly be set up. Colleges should plan to make their salary schedules approximate at least the foregoing averages.

XII. Recitation or quiz sections should not contain more than from 20 to 30 students. Fifteen or sixteen students should be the limit in laboratory sections.

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[1] Pomona College, Cal.; Mills College, Cal.; Trinity College, Conn.; George Washington University, D. C.; Emory College, Ga.; Knox College, Ill.; Butler College, Ind.; Morningside College, Iowa; Washburn College, Kans.; H. Sophie Newcomb Memorial College, La.; Bowdoin College, Me.; Goucher College, Md.; Boston University, Mass.; Clark College, Mass.; Carleton College, Minn.; Washington University, Mo.; Hobart College, N. Y.; Ohio Wesleyan University; Reed College, Oreg.; Lafayette College, Pa.; Haverford College, Pa.; Vanderbilt University, Tenn.; Middlebury College, Vt.; Randolph-Macon Woman's College, Va.; Beloit College, Wis.

XIII. At least $1,000 a year should be expended for the purchase of new books and periodicals for the library. Probably two or three times this figure would be needed to keep the library in a sound condition. A similar sum should be appropriated annually for the purchase of new equipment and apparatus for scientific laboratories.

TABLES.

Table 1 is a summary in which the principal facts derived from the inquiry are presented. The succeeding tables exhibit the same material, but are designed for convenience of reference. Each table shows the status of all the reporting institutions with respect to one or two of the suggested requirements for a successful college of arts and sciences or juxtaposes two related categories appearing in the summary table. Each is preceded by a brief statement of the points illustrated.

77642°—18——2

TABLE 1.—*Colleges of arts and sciences, 1915–16.* PART I: *Professors and instructors.*

Location.	Institution.	For men, for women, or coeducational.	Control.	Year in which bachelor's degree was first conferred.	Professors and instructors.																
					Total number of faculty.	Number holding only bachelor's degree.	Number holding master's degree and none higher (excluding honorary degrees).	Number holding doctor's degree (excluding honorary degrees).	Average number of teaching hours per week for those having independent charge of classes.	Number teaching more than 15 credit hours a week.	Average salary.								Number giving part time to preparatory instruction.	Average size of classes.	Eleven specified departments or fewer.
											Professors.		Associate professors.		Assistant professors.		Instructors.				
											Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
ALABAMA.																					
University	University of Alabama	Coed	State	1832	24	5	8	10	13	4	$2,100	.....	$1,700	.....	$1,125	.....	$600	.....	0	(1)	11
ARIZONA.																					
Tucson	University of Arizona	Coed	State	1895	28	7	10	6	15	0	2,230	$2,200	1,900	$1,900	1,825	$1,340	1,500	$1,425	0	6	11
ARKANSAS.																					
Conway	Central College	Women	Bapt.	1878	18	6	3	1	13	2	1,700	800	.....	.....	.....	.....	.....	.....	3	18	4
Do	Hendrix College	Coed	M. E. So.	1887	13	7	6	.....	17	9	1,500	.....	1,500	.....	1,100	.....	900	.....	.....	15	2
CALIFORNIA.																					
Claremont	Pomona College	Coed	Nonsect.	1894	45	17	12	12	13	0	1,890	2,100	1,600	.....	1,418	1,200	966	750	0	20	11
Los Angeles	Occidental College	Coed	Nonsect.	1894	22	5	6	8	15	2	1,100	1,050	.....	.....	.....	.....	.....	.....	.....	25	11
Mills College	Mills College	Women	Nonsect.	1889	34	11	7	5	13	4	1,700	1,633	.....	.....	.....	1,216	.....	967	.....	12	7
Redlands	University of Redlands	Coed	Bapt.	1910	20	7	6	.....	16	2	1,500	1,500	.....	1,200	.....	.....	.....	.....	6	10	11
Santa Clara	University of Santa Clara	Men	R. C.	1857	8	.....	.....	.....	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	25	11
Stanford University.	Leland Stanford Junior University.	Coed	Nonsect.	1892	145	28	37	71	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	0	.....	.....

COLORADO.																					
Boulder	University of Colorado	Coed	State	1882	76	22	23	24	9	4	2,550	2,550			1,525	1,525	900	900	0	18	11
Colorado Springs	Colorado College	Coed	Nonsect.	1882	35	9	14	8	14	4									0	21	11
University Park	University of Denver	Coed	M. E	1884	31	7	11	10	13	5	2,100	1,233			1,400	1,000	933	600	3	(2)	11
CONNECTICUT.																					
Hartford	Trinity College	Men	Nonsect.	1827	25	4	9	13	15	2	2,400				1,000		1,000		0	(3)	11
New Haven	Yale University	Men	Nonsect.	1702	104	4	16	82	15		4,250				2,300		1,350		0	20	11
DISTRICT OF COLUMBIA.																					
Washington	Gallaudet College	Coed	National	1869	16	4	6	2			2,450					200	1,057	720			4
Do	George Washington University.	Coed	Nonsect.	1824	38	4	9	14	13	4	1,716				1,066		258	500	0	23	11
Do	Howard University (colored).	Coed	National	1872	25	12	11	2	13	14	2,014		1,238		1,050		775		1	26	11
FLORIDA.																					
Gainesville	University of Florida	Men	State	1905	17	4	2	10	13	6									0	22	11
Lake City	Columbia College	Coed	Bapt.	1912	20	6	1	1	24	10	900	400							5	10	3
Tallahassee	Florida State College for Women.	Women	State	1906	21	5	5	7	16		2,000	2,000			1,400	1,400	1,000	1,000		15	11
GEORGIA.																					
Athens	University of Georgia	Men	State	1801	31	3	13	13	15	17	2,700		1,800		1,500		1,200		0	20	11
Atlanta	Atlanta University (colored).	Coed	Nonsect.	1876	17	4	3	1	6	0	1,225								17	14	
College Park	Cox College	Women	Nonsect.	1904	11	5	9	1	16	11	950	750							3		7
Dahlonega	North Georgia Agricultural College.	Coed	State	1878	14	7	2				1,650	1,000							5		3
Decatur	Agnes Scott College	Women	Nonsect.	1906	28	3	13	8	11	0	1,500	1,000		$900				750		20	11
Demorest	Piedmont College	Coed	Nonsect.	1899	16	11	2		15	0									5	25	5
Forsyth	Bessie Tift College	Women	Bapt.		25	18	2	1	4	5	2,000	1,000								18	8
Gainesville	Brenau College	Women	Nonsect.	1880	16	6	8	1	12	1	1,350	937			0	950	0	600	0	20	11
Oxford	Emory University	Men	M. E. So.	1841	16	7	4	5	10	0	2,200		1,600		1,500				0	20	11
Rome	Shorter College	Women	Bapt.	1882	12	9	4		16	4											4
IDAHO.																					
Moscow	University of Idaho	Coed	State	1896	40	14	10	11	10	5	2,180	2,150	1,800		1,466	1,500	1,200	1,200	0	17	11
ILLINOIS.																					
Aurora	Aurora College	Coed	Chris.	1905	12	6	0	2	20	5									6	11	8
Bloomington	Illinois Wesleyan University.	Coed	M. E.	1853	18	5	8	1	16	7	1,250	1,050							3	15	8
Carlinville	Blackburn College	Coed	Presb.	1870	12	9	1	1	15	4	1,000	650							8	10	7

[1] Laboratory, 36; nonlaboratory, 32.

[2] Laboratory, 10; nonlaboratory, 25.

[3] Laboratory, 13; nonlaboratory, 17.

TABLE 1.—*Colleges of arts and sciences, 1915–16.* PART I: *Professors and instructors*—Continued.

Location.	Institution.	For men, for women, or coeducational.	Control.	Year in which bachelor's degree was first conferred.	Professors and instructors.																
					Total number of faculty.	Number holding only bachelor's degree.	Number holding master's degree and none higher (excluding honorary degrees).	Number holding doctor's degree (excluding honorary degrees).	Average number of teaching hours per week for those having independent charge of classes.	Number teaching more than 15 credit hours a week.	Average salary.								Number giving part time to preparatory instruction.	Average size of classes.	Eleven specified departments or fewer.
											Professors.		Associate professors.		Assistant professors.		Instructors.				
											Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
ILLINOIS—con.																					
Chicago	De Paul University	Coed	R.C.	1899	20	3	12	2	10	1	$1,457	$950							7	12	11
Do	Loyola University	Men	R.C.	1876	18				10	0									6	24	11
Decatur	James Millikin University.	Coed	Presb		39	17	6	8		11										12	11
Galesburg	Knox College	Coed	Nonsect	1846	26	8	10	8	11	6	1,768		$1,100		$865	$797			0	24	11
Jacksonville	Illinois Woman's College	Women	M. E	1909	16	7	9		14	1		1,200				900			4	14	11
Lake Forest	Lake Forest College	Coed	Presb	1879	20	5	7	7	11	1	2,175		1,700		1,600	1,250		$500		(1)	11
Mount Carroll	Frances Shimer School	Women	Bapt	(2)	18	8	3	1	20	14								1,000	17	6	
Naperville	Northwestern College	Coed	Ev. Assn	1867	12	2	9	1	16	9	1,365	800							1	19	11
Rockford	Rockford College	Women	Nonsect	1886	28	8	7	7	13	4	1,400	1,400						1,166		16	11
Rock Island	Augustana College	Coed	Ev. Luth	1877	14	4	6	1	18	11	1,418				1,250			350	7	16	7
INDIANA.																					
Bloomington	Indiana University	Coed	State	1830	233	28	59	55	13	23	3,153		2,135	$2,300	1,553	1,600	$1,107	1,062	0	26	11
Crawfordsville	Wabash College	Men	Nonsect	1838	21	1	7	4	15	4									0	(3)	11
Earlham	Earlham College	Coed	Friends	1862	34	9	12	11	12	7									0	13	11
Franklin	Franklin College	Coed	Nonsect	1847	18	2	12	1	10	7	1,300	1,150							8	23	11
Greencastle	De Pauw University	Coed	M. E	1894	37	10	14	9		8	1,950			1,500	1,700	1,200	1,000	550	1		11
Indianapolis	Butler College	Coed	Chris	1856	20	4	6	10	15	13	1,873	1,873			750	750	475	475		19	11

Notre Dame	University of Notre Dame.	Men	R. C.		80	30	15	5	10	5									10	(4)	11
Upland	Taylor University	Coed	M. E.		21	10	2	2		11											5
IOWA.																					
Cedar Falls	Iowa State Teachers College.	Coed	State	1904	98	35	31	8											31	22	7
Cedar Rapids	Coe College	Coed	Nonsect.	1884	43	9	13	4	16	8	$1,500	$1,400	$1,000		$900		$800	$800	0	22	11
Clinton	Wartburg College	Men	Luth.		9	5	2	0	20	0									7		
Des Moines	Des Moines College	Coed	Bapt.	1875	12	8	6	1	17	0									2	17	
Do	Drake University	Coed	Nonsect.	1882	31	4	10	10	15	1	2,300	2,000			1,300	$1,300			0	20	11
Fairfield	Parsons College	Coed	Presb.	1886	12	3	8	1	13	2	1,400	0					850	750	0	16	9
Iowa City	State University of Iowa.	Coed	State	1858	148	27	51	50	10	12	2,740	3,000	2,400		1,777	1,162	1,162	1,163	0	22	11
Mount Vernon	Cornell College	Coed	M. E.	1858	31	8	14	5		7	1,450	1,450			1,150	1,150	850	850	8	20	11
Pella	Central University of Iowa.	Coed	Bapt.	1851	17	6	6	2	15	6									11	12	9
Sioux City	Morningside College	Coed	M. E.	1891	19	2	11	6	16	8	1,454	1,200			950		0	800	3	18	11
Storm Lake	Buena Vista College	Coed	Presb.	1896	10	3	7	0	15	4	1,200	1,000							6	10	11
KANSAS.																					
Atchison	Midland College	Coed	Luth.	1891	18	4	8	2	17	9	1,200	600							6	18	5
Emporia	College of Emporia	Coed	Presb.	1887	18	5	11	1	17	8	1,790	1,320					750	775	0	17	11
Ottawa	Ottawa University	Coed	Bapt.	1886	11	3	7	1	17	6	1,372	1,500							0	18	11
Salina	Kansas Wesleyan University.	Coed	M. E.		25	1	10	1	15	6	1,050	1,050							5	18	8
Sterling	Cooper College	Coed	U. P.	1892	10	4	6	0	17	9	1,050	850								10	8
Topeka	Washburn College	Coed	Nonsect.	1868	24	8	12	8	15	5	1,450	1,220	1,350		1,200	950	1,100	720	6	18	11
Winfield	Southwestern College	Coed	M. E.	1889	24	4	8	2	14	3	1,200	1,000							3	20	8
KENTUCKY																					
Bowling Green	Ogden College	Men	Nonsect.	1881	8		3		20	0	1,300								2	8	7
Danville	Centre College	Men	Presb.	1826	12	1	1	10	13	1										18	9
Georgetown	Georgetown College	Coed	Bapt.	1832	26	9	7	1	12	0	1,500								5	26	1
Lexington	University of Kentucky	Coed	State		28	18	15	6	15	7										20	17
Do	Transylvania College	Coed	Nonsect.	1806	26	9	9	6	14	6	1,500								0	15	9
Louisville	University of Louisville	Coed	City	1908	24	6	6	7		2	1,800	1,800	1,600	$1,600	1,500	1,500	800	800	0	(3)	11
Russelville	Bethel College	Men	Bapt.	1857	6	4	1	0	16	3	1,270	0							1	6	5
LOUISIANA.																					
New Orleans	H. Sophie Newcomb Memorial College.	Women	Nonsect.	1891	29	3	9	11	13	5	2,500	1,875		2,000		1,320	840	1,200	0	13	11
Do	Loyola University	Men	R. C.	1911	10																

[1] Laboratory, 8; nonlaboratory, 15.
[2] No degree.
[3] Laboratory, 15; nonlaboratory, 21½.
[4] Laboratory, 30; nonlaboratory, 4.
[5] Laboratory, 10¼; nonlaboratory, 17½.

TABLE 1.—*Colleges of arts and sciences, 1915–16.* PART I: *Professors and instructors*—Continued.

Location.	Institution.	For men, for women, or coeducational.	Control.	Year in which bachelor's degree was first conferred.	Professors and instructors.																
					Total number of faculty.	Number holding only bachelor's degree.	Number holding master's degree and none higher (excluding honorary degrees).	Number holding doctor's degree (excluding honorary degrees).	Average number of teaching hours per week for those having independent charge of classes.	Number teaching more than 15 credit hours a week.	Average salary.								Number giving part time to preparatory instruction.	Average size of classes.	Eleven specified departments or fewer.
											Professors.		Associate professors.		Assistant professors.		Instructors.				
											Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.			
1		3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
MAINE.																					
Brunswick	Bowdoin College	Men	Nonsect.	1806	28	3	12	12	11	0	$2,725				$1,665		$1,200		0	30	11
Lewiston	Bates College	Coed	Nonsect.	1867	28	5	17	5	12	4	1,850								0	25	11
Orono	University of Maine	Coed	State	1872	56	16	20	20	14	0	2,119	$2,150	$1,624	$1,550	1,250		863	$1,200	0	(1)	11
MARYLAND.																					
Annapolis	St. John's College	Men	Nonsect.	1872	13	2	9	2	19	5	1,500								2	15	11
Baltimore	Goucher College	Women	M. E.	1895	35	6	8	20	9	3	2,199	2,333	1,600	1,700	1,500	$1,500		1,133	0	21	11
Do	Johns Hopkins University.	Men	Nonsect.	1879	49	1	1	46													
Do	Morgan College (colored)	Coed	M. E.	1895	8	4	0	2	10	1	1,340	600							5	18	4
Chestertown	Washington College	Coed	Nonsect.		9	1	4	3	16	5	1,475						975		0	16	6
Ellicott City	Rock Hill College	Men	R. C.	1887	15	8	4	1	16	5									4	10	
Frederick	Hood College	Women	Ref.	1898	15	5	7	1	13	2	1,725	1,060							4	12	8
Lutherville	Maryland College for Women.	Women	Nonsect.	1896	11	6	1	1	20	3	2,000	1,017							3	(2)	6
MASSACHUSETTS.																					
Amherst	Amherst College	Men	Nonsect.	1825	47	6	14	26		0									0		11
Boston	Boston University	Coed	Nonsect.	1877	29	4	5	16		3	2,388	850	2,500		1,800		800	900	0	25	11

Cambridge	Harvard University	Men	Nonsect.	1642																	
Northampton	Smith College	Women	Nonsect.	1879	130	21	37	55	10	1									0	22	11
Norton	Wheaton College	Women	Nonsect.	1914	27	4	6	9	11	0									0	15	11
South Hadley	Mount Holyoke College	Women	Nonsect.	1888	88	14	22	37	9	0	2,500	1,900	1,866	1,361	1,150	1,425	1,100	1,016	0	17	11
Tufts College	Tufts College	Coed	Nonsect.	1857	248	4	14	11	10	5	2,050				1,520		1,140		0	17	11
Worcester	Clark College	Men	Nonsect.	1905	28	3	6	18	10	1	2,213				1,500		1,250		0	11	11
MICHIGAN.																					
Alma	Alma College	Coed	Presb.	1891	19	4	7	3	10	4	1,583						1,000	650	0	14	9
Ann Arbor	University of Michigan	Coed	State	1845	266	75	66	120	12		3,331	2,500	2,183		1,837	1,700	1,182	1,300	0	25	11
MINNESOTA.																					
Collegeville	St. John's University	Men	R. C.																5		4
Minneapolis	Augsburg Seminary	Men	Luth.	1879	18	6	8	1	18	5	1,500						400		16	8	2
Northfield	Carleton College	Coed	Nonsect.	1874	35	8	8	19	12	3	2,125	2,050			1,700		1,283	1,033	0	18	11
St. Paul	Hamline University	Coed	M. E.		18	4	8	6		2										30	11
Do	Macalester College	Coed	Presb.	1889	22	4	10	4	16	7	1,571	1,600	1,230	1,000			900	782	0	16	11
Do	College of St. Catherine	Women	R. C.	1913	35	11	19	7		3									1	15	11
St. Peter	Gustavus Adolphus College.	Coed	Luth.	1890	15	3	3	4	18	11	1,400	1,400							7	25	11
Winona	College of St. Teresa	Women	R. C.	1914	41	8	10	2	15	0									15	7	11
MISSISSIPPI.																					
Clinton	Mississippi College	Men	Bapt.			3	7	2		6											6
Meridian	Meridian College	Coed	Nonsect.	1903	17	16	1	0													
University	University of Mississippi	Coed	State	1851	20	3	9	8	14	4	2,218		1,683		1,100		1,000			25	11
MISSOURI.																					
Columbia	Stephens College	Women	Bapt.	(3)	16	10	2	0	14	0	1,400	800					525	420	5	16	7
Fulton	Westminster College	Men	Presb.	1855	13	3	7	1	18		1,270								8		2
Liberty	William Jewell College	Men	Bapt.	1855	16	2	6	8	15	10	1,600				1,250				6	20	10
Parkville	Park College	Coed	Presb.		19	6	11	1	14	1	1,454	837							4	24	11
St. Charles	Lindenwood Female College.	Women	Presb.		12	8	2	1	13	8									12	14	
St. Louis	Forest Park College	Women	Nonsect.	1893	24	7	2	1		0									7		7
Do	St. Louis University	Men	R. C.	1834	26		2		11	0									3	15	9
Do	Washington University	Coed	Nonsect.	1862	70	16	14	36	11	1	3,076	2,000	2,150		1,643		1,208	1,050	0	17	11
Springfield	Drury College	Coed	Nonsect.	1875	15	2	6	7	14	5	1,445	1,100							0	30	11
Warrenton	Central Wesleyan College	Coed	M. E.	1870	23	5	9	1	13	9	1,150	900							5	20	8
MONTANA.																					
Missoula	University of Montana	Coed	State		40	14	10	12		6	2,523	2,000			1,700	1,625	1,180	1,262	0	13	11

[1] Laboratory, 15; nonlaboratory, 35.

[2] Laboratory, 15; nonlaboratory, 14.

[3] No degree.

TABLE 1.—*Colleges of arts and sciences, 1915–16.* PART I: *Professors and instructors*—Continued.

Location.	Institution.	For men, for women, or coeducational.	Control.	Year in which bachelor's degree was first conferred.	Professors and instructors.																
					Total number of faculty.	Number holding only bachelor's degree.	Number holding master's degree and none higher (excluding honorary degrees).	Number holding doctor's degree (excluding honorary degrees).	Average number of teaching hours per week for those having independent charge of classes.	Number teaching more than 15 credit hours a week.	Average salary.								Number giving part time to preparatory instruction.	Average size of classes.	Eleven specified departments or fewer.
											Professors.		Associate professors.		Assistant professors.		Instructors.				
											Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
NEBRASKA.																					
Bellevue	Bellevue College	Coed	Presb	1889	14	7	3	2	17	4	$1,000	$1,000					$900	$900	7	10	7
College View	Union College	Coed	S. D. Ad.	1894	26	6	6	0	20	12									12	17	4
Crete	Doane College	Coed	Cong	1877	18	7	5	3	11	5									2	11	8
Lincoln	University of Nebraska	Coed	State	1873	95	13	38	38	12	25	2,632	2,300	$1,638	$1,300	$1,257	$1,125	817	720	6	15	11
NEW HAMPSHIRE																					
Durham	New Hampshire College of Agriculture and Mechanic Arts.	Coed	State		31	18	6	4	13	4	2,100	2,000	1,800		1,450	1,200	1,160		0	25	8
NEW JERSEY.																					
Convent Station	College of St. Elizabeth	Women.	R. C	1902	34	8	8	4	10		2,000	700							4	(1)	11
Kenilworth	Upsala College	Coed	Luth	1905	12	4	4	0	24	8	1,300								9	12	3
NEW MEXICO.																					
Albuquerque	University of New Mexico.	Coed	State		20	13	3	3	14	8	1,700		1,400	1,400	1,200				4	(2)	11

NEW YORK.																					
Albany	New York State College for Teachers.	Coed	State	1897	52	23	10	11	14	0	3,000	3,000			1,900	1,900	1,400	1,200	6	70	11
Alfred	Alfred University	Coed	Nonsect	1857	28	8	16	2	11	0	1,500	1,070	1,100	900			940	700	0	15	11
Annandale	St. Stephen's College	Men	Epis	1861	9	3	5	1		2									3	7	7
Aurora	Wells College	Women	Nonsect	1869	31	7	10	9	13	2	2,000	1,180	2,000	1,133				966	0	12	11
Canton	St. Lawrence University	Coed	Nonsect	1863	16	4	8	3	17	7	1,933				1,250		660		0	20	11
Elmira	Elmira College	Women	Nonsect		32	13	8	8	13	0									0	14	11
Geneva	Hobart College	Coed	Nonsect	1827	26	5	11	8	14	3	1,521	1,500			1,000	900	1,000		0	16	11
New Rochelle	College of New Rochelle	Women	R. C	1908	22	5	5	7		0	450	400							1	30	9
New York	Barnard College	Women	Nonsect	1893	88	10	23	54											0		11
Do	College of the City of New York.	Men	City	1854	142	33	21	70	12	38	4,539		2,900		2,628		2,021		14	21	11
Do	Columbia University	Men	Nonsect	1758	133	17	24	90			4,815		3,259		2,359		1,509		0	22	11
Do	Hunter College of the City of New York.	Women	City	1892	118	28	54	16	16	45	5,750	4,062	3,133	3,500	2,730	3,059	1,950	2,838	0	17	11
Do	New York University	Coed	Nonsect	1833	47	9	17	21		10	2,242				1,931		1,221		0	23	11
Poughkeepsie	Vassar College	Women	Nonsect	1867	112	21	22	57	13	0	3,200		1,750		1,400		1,150		0	58	11
Rochester	University of Rochester	Coed	Nonsect	1851	45	13	14	16	12	0									0	20	11
Schenectady	Union University	Men	Nonsect	1797	40	9	15	15	15	10	2,100		1,900		1,590		1,170		0	(2)	11
NORTH CAROLINA.																					
Chapel Hill	University of North Carolina.	Coed	State	1798	52	4	21	26	11	3	2,332		1,700		1,250		856		0	24	11
Davidson	Davidson College	Men	Presb	1840	13	1	4	7	15	8	2,000		1,650						0	25	11
Durham	Trinity College	Coed	M. E. So	1853	28	7	9	12	12	1									0	30	11
Elon College	Elon College	Coed	Chris	1890	27	5	11	4		11	1,270				900		600		9	24	11
Guilford College	Guilford College	Coed	Friends	1889	17	9	7	1	13	12	1,225	700	1,000	650	800	750		675	9	18	9
Raleigh	Shaw University (colored).	Coed	Bapt	1878	29	7	1	0	23	14									29	14	8
Weaverville	Weaver College	Coed	M. E. So		8	3	2	0	14	4	730	650							6	18	
Winston-Salem	Salem Academy and College.	Women	Morav	1878	35	17	2	0	18	1	1,600	933	400	600	0	850	0	570	15	23	8
NORTH DAKOTA.																					
University	University of North Dakota.	Coed	State		55	11	15	24	12	18	2,440		1,950		1,650	1,500	1,430	1,150	6	17	11
OHIO.																					
Akron	Municipal University of Akron.	Coed	City	1873	21	5	10	3	18	7	1,800				1,200	1,200	1,080	900	0	(4)	11
Athens	Ohio University	Coed	State	1815	36	6	15	8		0	1,930				1,310	900	1,225	1,075	1	18	11
Berea	Baldwin-Wallace College	Coed	Ger. M. E.	1850	19	4	11	4	16	8	1,500				1,200		900			25	11
Bluffton	Bluffton College	Coed	Mennon		16	9	7	4	14	4	1,300				1,000		850		2	11	10
Cedarville	Cedarville College	Coed	R. Presb	1897	7	4	3	0	16	7	1,300	580							3		6
Cincinnati	University of Cincinnati	Coed	City	1877	236	4	18	41	12	2	3,400	2,500	2,500		1,950	1,800	1,400	1,100	0	(5)	11

[1] Laboratory, 15; nonlaboratory, 25.
[2] Laboratory, 8; nonlaboratory, 13.
[3] Laboratory, 15; nonlaboratory, 16.
[4] Laboratory, 11; nonlaboratory, 14.
[5] Laboratory, 36; nonlaboratory, 30.

TABLE 1.—*Colleges of arts and sciences, 1915–16.* PART I: *Professors and instructors*—Continued.

Location.	Institution.	For men, for women, or coeducational.	Control.	Year in which bachelor's degree was first conferred.	Professors and instructors.						Average salary.										
					Total number of faculty.	Number holding only bachelor's degree.	Number holding master's degree and none higher (excluding honorary degrees).	Number holding doctor's degree (excluding honorary degrees).	Average number of teaching hours per week for those having independent charge of classes.	Number teaching more than 15 credit hours a week.	Professors.		Associate professors.		Assistant professors.		Instructors.		Number giving part time to preparatory instruction.	Average size of classes.	Eleven specified departments or fewer.
											Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
OHIO—contd.																					
Cleveland	Western Reserve University.	Coed	Nonsect	1830	79	9	13	50	10	1	$3,300	$2,450							0	18	11
Columbus	Capital University	Men	Luth	1885	14	3	7	3	12	2	1,475								8	20	9
Dayton	St. Mary College	Men	R. C	1885	16	2	4	7	17	0										12	9
Defiance	Defiance College	Coed	Chris		16	4	6	4	14	4									3	15	11
Delaware	Ohio Wesleyan University.	Coed	M. E	1846	59	15	20	17	12	7	2,020	1,850	$1,600	$1,250	$1,250	$1,100	$1,000	$750	1	26	11
Gambier	Kenyon College	Men	P. E	1829	14	1	5	8	14	0	1,650				1,300					14	11
Marietta	Marietta College	Coed	Nonsect	1838	18	5	2	7	12	0	1,800							600	0	18	11
New Concord	Muskingum College	Coed	U. Presb	1839	38	6	11	2		10	1,200	1,200							5	18	11
Oxford	Miami University	Coed	State	1826	31	7	8	16	12		2,331		1,583		1,319				0	21	11
Do	Oxford College for Women.	Women	Nonsect	1886	19	4	1	7	7	4									0	13	10
Do	Western College for Women.	Women	Nonsect	1895	32	12	10	6	11	0	1,300	1,205	1,200	1,070				875	0	13	10
Painesville	Lake Erie College	Women	Nonsect	1899	21	6	9	3	12	1		1,181		1,042				940	0	(1)	11
Rio Grande	Rio Grande College	Coed	F. Bapt	1883	10	4	3	1		6	945	783						300	7		5
Westerville	Otterbein University	Coed	U. B	1857	17	2	7	6	16		1,385	1,133							4	16	11
Wooster	College of Wooster	Coed	Presb	1870	32	11	12	8	14	12	1,750	1,350			1,300	1,200	1,380	1,200	3	20	11

OKLAHOMA.																					
Guthrie	Methodist University of Oklahoma.	Coed	M. E.	1912	9	4	3	1	22	8	1,100	1,100							2	10	6
Kingfisher	Kingfisher College	Coed	Cong.	1900	9	3	5	1	19	5	1,100	1,100							2	6	9
Norman	University of Oklahoma.	Coed	State	1898	63	20	24	18	14	4	2,075	1,800	1,693		1,257	1,200	977	1,050	0		11
OREGON.																					
Albany	Albany College	Coed	Presb.	1883	13	1	8	2	12	2	1,260	1,050						700	4	8	8
Forest Grove	Pacific University	Coed	Cong.	1863	20	7	5	1	13	3	1,150	800					1,100	750	0	13	11
McMinnville	McMinnville College	Coed	Bapt.	1884	16	6	3	0	22	10	975	850							8	14	8
Newberg	Pacific College	Coed	Friends	1893	10	10	0	0	20	3	950	825							6	20	2
Portland	Reed College	Coed	Nonsect.	1915	19	3	3	12			2,700	2,080			1,500				0	10	11
Salem	Willamette University	Coed	M. E.	1859	13	1	7	4	14	5	1,350									11	10
PENNSYLVANIA.																					
Bethlehem	Moravian College	Men	Morav.	1870	8	2	1	5	20	5										11	4
Bryn Mawr	Bryn Mawr College	Women	Nonsect.	1888	43	1	3	39		0	2,923	3,000	2,133	2,180	1,600	1,600				14	11
Beaver	Beaver College	Women	M. E.	1903	8	1	7	0	2	3	1,313	1,150							2	10	6
Chambersburg	Wilson College	Women	Presb.	1873	24	8	10	5	11	0	2,000	900							0	20	8
Easton	Lafayette College	Men	Presb.	1836	50	23	11	13	12	0	2,150		1,600		1,500		950		0	20	11
Gettysburg	Pennsylvania College	Coed	Luth.	1834	26	6	7	11	16	10	1,550				1,400		850			25	11
Haverford	Haverford College	Men	Friends	1856	25	2	5	15	11	2	3,600		2,960		1,500				0	15	11
Lancaster	Franklin and Marshall College.	Men	Ref.	1853	16	2	10	4	15	10	1,950								0	22	11
Lincoln University.	Lincoln University (colored).	Men		1867	13	7	5	3	12	0	1,400			1,000					0	28	6
Meadville	Allegheny College	Coed	M. E.	1821	25	4	9	10	11	0	2,100				1,300	1,300	1,000		0	20	11
Mechanicsburg	Irving Female College	Women	Luth.	1860	19	2	5	1	18	2	1,325	820							9	(2)	3
Myerstown	Albright College	Coed	U. Evang.	1887	10	2	6	2	13	5	1,250								6	14	7
New Wilmington.	Westminster College	Coed	U. Presb.	1899	20	2	7	1	15	0	1,500	1,200								20	11
Philadelphia	Drexel Institute	Coed	Nonsect.	1915	69	25	9	1	9	1	2,800	1,600			1,560	1,260	1,090	900	5	(3)	11
Do	University of Pennsylvania.	Men	Nonsect.	1757	154	14	23	114		0									0		11
Selinsgrove	Susquehanna University	Coed	Luth.	1885	23	4	11	3	18	23	1,000	500							1	25	5
State College	Pennsylvania State College.	Coed	State	1861	[4] 65	16	25	18	14	14	1,987		1,604	1,300	1,278		1,056	1,050	0		11
					[5] 28	7	17	4	16	25	2,075		1,500	0	1,270		1,030		0		3
Swarthmore	Swarthmore College	Coed	Nonsect.	1873	39	8	10	19	11	1										22	11
Washington	Washington and Jefferson College.	Men	Nonsect.	(6)	32	3	7	11	10	1										28	11
Waynesburg	Waynesburg College	Coed	Presb.	1851	11	2	8	1	18	10	1,000									10	11
SOUTH CAROLINA.																					
Charleston	College of Charleston	Men	City	1794	8	3	3	2	13	0	1,512									12	6
College Place	Columbia College	Women	M. E. So.	1895	21	2	7	2	16	10	1,500	600							2	30	8

[1] Laboratory, 6; nonlaboratory, 12.
[2] Laboratory, 10; nonlaboratory, 12.
[3] Laboratory, 33; nonlaboratory, 22.
[4] School of Liberal Arts.
[5] School of Natural Science.
[6] Washington College, 1808; Jefferson College, 1802; united in 1866.

TABLE 1.—*Colleges of arts and sciences, 1915–16.* PART I: *Professors and instructors*—Continued.

Location.	Institution.	For men, for women, or coeducational.	Control.	Year in which bachelor's degree was first conferred.	Professors and instructors.															
					Total number of faculty.	Number holding only bachelor's degree.	Number holding master's degree and none higher (excluding honorary degrees).	Number holding doctor's degree (excluding honorary degrees).	Average number of teaching hours per week for those having independent charge of classes.	Number teaching more than 15 credit hours a week.	Average salary.								Number giving part time to preparatory instruction.	Average size of classes.	Eleven specified departments or fewer.
											Professors.		Associate professors.		Assistant professors.		Instructors.				
											Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
SOUTH CAROLINA—contd.																					
Columbia	University of South Carolina.	Coed	State	1807	32	6	12	9	14	12	$2,125		$1,500		$1,200		$500		0	25	11
Greenville	Furman University	Men	Bapt	1881	11	2	3	2	15	0	1,150								0	20	10
Spartanburg	Converse College	Women	Nonsect	1893	13	4	5	3		2	1,650	$950							0	23	10
Do	Wofford College	Men	M. E. So.	1856	13	2	5	6	15	4	2,175								1	32	10
SOUTH DAKOTA.																					
Vermillion	University of South Dakota.	Coed	State	1888	36	11	14	10	12	0	1,930	1,600	1,700		1,500	$1,225	1,150	$750	2	12	11
TENNESSEE.																					
Bristol	King College	Men	Presb	1902	8	1	6	0		5	1,125								2	10	7
Chattanooga	University of Chattanooga.	Coed	M. E.		9		5	4	15	0	1,900	1,400								15	
Greeneville	Tusculum College	Coed	Nonsect		11	5	2	0	10	1	1,100								6	11	4
Knoxville	Knoxville College (colored).	Coed	U. Presb.	1883	8	4	4	0	18	7	1,175	800							8		

Milligan	Milligan College	Coed	Chris	1882	10	2	5	0	16	0	1,200	850							1		6
Murfreesboro	Tennessee College	Women	Bapt	1912	6	2	3	1	16	4	1,450	1,283							2	12	
Nashville	Fisk University (colored)	Coed	Cong	1875	32	15	4	2		9	1,400	670							14	22	3
Do	George Peabody College for Teachers.	Coed	Nonsect	1879	100	39	38	58													4
Do	Vanderbilt University	Coed	Nonsect	1877	35	9	8	18	15		2,900		1,900		1,600		1,000		0	30	11
Sewanee	University of the South	Men	P. E	1874	18	3	5	9	12	3	1,900		1,600		1,200		900		0	32	11
TEXAS.																					
Austin	University of Texas	Coed	State	1885	117	14	38	59			3,050	3,000	2,283	$2,450	1,900	2,000	1,392	1,292	0		11
Brownwood	Howard Payne College	Coed	Bapt	1896	7	2	5	0	13	0	1,100	1,000								18	10
Houston	Rice Institute	Coed	Nonsect	1916	41	13	9	18	11											19	11
Sherman	Austin College	Men	Presb	1854	10	3	6	1	14	2	1,660								2	15	9
Waco	Baylor University	Coed	Bapt		66	25	10	6	15											20	11
UTAH.																					
Salt Lake City	University of Utah	Coed	State	1891	37	11	12	9		12	2,373		2,100		1,500		1,120			(1)	11
VERMONT.																					
Middlebury	Middlebury College	Coed	Nonsect	1802	30	12	14	6	12	1	1,941				1,531	1,300	975		0	18	11
Winooski	St. Michael's College	Men	R. C	1913	11	7	2	0	16	3									6	10	7
VIRGINIA.																					
Bridgewater	Bridgewater College	Coed	Breth	1891	13	5	3	3	15	0	1,094				750		620	500	2	13	7
Charlottesville	University of Virginia	Men	State	1849	59	10	13	21		6									0	25	11
Danville	Roanoke Institute	Women	Bapt	1886	8	5	2	1	14	8	2,000	800									
Emory	Emory and Henry College.	Men	M. E. So		10	2	4	4	15												11
Hampden-Sidney	Hampden-Sidney College.	Men	Presb	1786	10	1	3	4	11											25	9
Hollins	Hollins College	Women	Nonsect	1903	12	5	3	3	12	2										12	8
Lexington	Washington and Lee University.	Men	Nonsect	1785	28	7	4	14	10	0	2,659		1,536				515		0	20	11
Lynchburg	Randolph-Macon Woman's College.	Women	M. E. So	1896	46	13	10	12	14	1	1,935				1,250				0	(2)	11
Richmond	Richmond College	Coed	Bapt	1849	29	4	11	14	14	1	2,000	2,000	1,500	1,500						33	11
Do	Virginia Union University (colored).	Coed	Bapt	1902	12	8	3	1	16		1,000		700						3	11	6
Williamsburg	College of William and Mary.	Men	State		15	3	9	3	13	2	1,800								2	18	7
WASHINGTON.																					
Seattle	University of Washington.	Coed	State	1899	124	25	33	61	11	17	2,739	2,100	2,127		1,800	1,612	1,345	1,160	0	23	11
Spokane	Spokane College	Coed		1909	6	4			30	6	1,250	800							6	10	

[1] Laboratory, 25; nonlaboratory, 26.

[2] Laboratory, 18¼; nonlaboratory, 25$\frac{1}{17}$.

TABLE 1.—*Colleges of arts and sciences, 1915–16.* PART I: *Professors and instructors*—Continued.

Location.	Institution.	For men, for women, or coeducational.	Control.	Year in which bachelor's degree was first conferred.	Professors and instructors.						Average salary.										
					Total number of faculty.	Number holding only bachelor's degree.	Number holding master's degree and none higher (excluding honorary degrees).	Number holding doctor's degree (excluding honorary degrees).	Average number of teaching hours per week for those having independent charge of classes.	Number teaching more than 15 credit hours a week.	Professors.		Associate professors.		Assistant professors.		Instructors.		Number giving part time to preparatory instruction.	Average size of classes.	Eleven specified departments or fewer.
											Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
WEST VIRGINIA.																					
Elkins	Davis and Elkins College	Coed	Presb	1910	29	5	3	1	16	7	$1,050	$800	$200	$400			$1,000		11	12	
WISCONSIN.																					
Appleton	Lawrence College	Coed	Nonsect	1857	35	7	10	16	14	0	1,850	1,450				$1,200		$900	0	(1)	11
Beloit	Beloit College	Coed	Nonsect	1851	41	5	13	22		6	1,852		1,600		$1,400		1,085		0	20	11
Madison	University of Wisconsin	Coed	State	1854	283	48	94	138	10	4	3,501		2,525		1,832	1,750	1,319	1,273	7	25	11
Milton	Milton College	Coed	S. D. B	1870	14	3	9		15	6	900							600	7	(2)	6
Milwaukee	Concordia College	Men	Luth		9			1	26	7	1,550								8	33	5
Do	Marquette University	Men	R. C																		
Do	Milwaukee-Downer College.	Women	Nonsect	1895	35	8	8	4	15	5		1,600				1,300		1,075	0	16	11
Plymouth	Mission House	Coed	Ref		9		3	2	25	9	1,050								0	14	
Prairie du Chien	Campion College	Men	R. C	1884	15	10	2		11										2		11
Ripon	Ripon College	Coed	Nonsect	1866	25	15	6	4			1,400	900		850				700	0	18	11
Sinsinawa	St. Clara College and Academy.	Women	R. C	1904	14	7	3	1	14										6	(3)	6

[1] Laboratory, 22; nonlaboratory, 24.

[2] Laboratory, 7; nonlaboratory, 11.

[3] Laboratory, 8; nonlaboratory, 10.

TABLE 1.—*Colleges of arts and sciences, 1915–16.* PART II: *Students, expenditures, and receipts.*

Location.	Institution.	Students, requirements, degrees, and courses.																Expenditures for 1914–15.				Receipts for 1914–15, exclusive of additions to endowments.	Debt.
		Preparatory.		Regular.		Conditioned.		Special.		Total (including professional and special departments).		High school graduates entering in 1915.		Number of standard units required for admission.	Maximum number of entrance conditions allowed.	Number of semester hours required for bachelor's degree.	Junior college. (X=Yes; O=No.)	Salaries of college teachers.	Maintenance.	Increase of plant and lasting improvements.	Administration, including handling of institution's funds.		
		Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.										
1	2	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
ALABAMA.																							
University	University of Alabama	0	0	337	82	18	6	11	0	685	90	109	16	14	2	120	O	$58,736	$17,905	$44,460	$13,075	$210,421	0
ARIZONA.																							
Tucson	University of Arizona	0	0	209	141	0	0	60	50	269	191	65	35	15	2	127	O	61,300	48,850	10,000	9,559	423,021	0
ARKANSAS.																							
Conway	Central College	0	41	0	49	0	12	0	58	0	96	0	4	14	2	65	O	3,800	1,650	1,000	4,000	29,193	$24,000
Do	Hendrix College	0	0	244	25	....	....	6	0	250	25	....	....	15	3	120	O	11,625	2,644	3,336	6,847	39,966	58,886
CALIFORNIA.																							
Claremont	Pomona College	0	0	236	294	....	....	5	5	241	299	109	120	15	3	126	O	50,813	32,027	82,412	17,224	347,133	0
Los Angeles	Occidental College	....	....	186	131	....	....	9	7	195	138	69	60	15	0	124	O	26,853	5,097	....	7,803	50,727	8,000
Mills College	Mills College	....	....	0	115	0	27	0	45	0	220	....	....	15	3	124	O	35,067	24,795	803	8,268	80,774	0
Redlands	University of Redlands	14	5	50	63	....	....	8	56	80	179	30	....	15	2	120	O	23,200	3,946	650	16,178	50,505	125,559
Santa Clara	University of Santa Clara	157	0	80	0	3	0	10	0	307	0	19	0	16	3	178	O	....	....	....	....	61,128	....
Stanford University.	Leland Stanford Junior University.	0	0	1,574	556	0	0	70	0	1,717	561	(471)		15	0	120	O	500,841	127,293	221,515	44,532	274,20	....

TABLE 1.—*Colleges of arts and sciences, 1915–16.* PART II: *Students, expenditures, and receipts*—Continued.

Location.	Institution.	Students, requirements, degrees, and courses.																Expenditures for 1914–15.				Receipts for 1914–15, exclusive of additions to endowments.	Debt.
		Preparatory.		Regular.		Conditioned.		Special.		Total (including professional and special departments).		High school graduates entering in 1915.		Number of standard units required for admission.	Maximum number of entrance conditions allowed.	Number of semester hours required for bachelor's degree.	Junior college. (X=Yes; O=No.)	Salaries of college teachers.	Maintenance.	Increase of plant and lasting improvements.	Administration, including handling of institution's funds.		
		Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.										
1	2	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
COLORADO.																							
Boulder	University of Colorado	0	0	385	436	35	27	17	12	892	462	188	170	15	1	122	O	$96,300	$92,800	$11,500	$23,000	$300,436	0
Colorado Springs	Colorado College	0	0	142	285	17	14	14	55	318	382	67	125	15	1	120	O	58,166	395	21,233	9,890	148,305	0
University Park	University of Denver	35	27	228	276	15	20	27	14	707	397	119	133	15	1	124	O	.....	.....	.....	.....	90,000	.....
CONNECTICUT.																							
Hartford	Trinity Collage	0	0	230	0	.....	.....	5	0	235	0	85	0	14½	2	120	O	42,480	82,508	47,040	10,812	83,835	$5,000
New Haven	Yale University	0	0	1,263	0	220	0	6	0	3,083	222	408	0	14½	.....	120	O	280,000	418,000	115,000	114,000	1,777,134	0
DISTRICT OF COLUMBIA.																							
Washington	Gallaudet College	20	18	45	28	3	2	.....	.....	68	48	15	11	11	1	139	O	.....	.....	.....	.....	.....	.....
Do	George Washington University.	0	0	263	125	36	4	177	134	476	263	96	48	15	3	120	O	45,620	13,032	10,490	17,141	220,964	0
Do	Howard University (colored).	.....	.....	262	71	.....	.....	.....	.....	1,130	311	84	16	15	2	120	O	35,675	20,118	6,835	15,980	203,964	0
FLORIDA.																							
Gainesville	University of Florida	0	0	71	0	4	0	21	0	410	0	51	0	15	2	124	O	28,070	7,629	3,229	6,100	170,297	0
Lake City	Columbia College	22	11	14	12	2	0	30	35	98	93	5	2	15	2	128	O	4,293	.....	.....	9,576	.....	25,000
Tallahassee	Florida State College for Women.	0	34	0	149	0	0	0	14	0	395	0	74	15	2	120	O	50,315	18,625	5,000	.....	97,885	0

GEORGIA.																							
Athens	University of Georgia	0	0	251	0	22	0	5	0	1,402	0	75	0	14	2	132	O	52,050	14,125	7,100	12,628	286,302	0
Atlanta	Atlanta University (colored).	120	15	32	12	7	4	.....	.....	159	276	2	2	15	2	136	O	20,135	5,795	3,325	6,637	67,248	42,709
College Park	Cox College	.....	.....	.....	.....	.....	.....	.....	.....	0	182	.....	.....	14	2	120	O	6,284	1,800	4,000	5,000	31,000	.....
Dahlonega	North Georgia Agricultural College.	100	50	83	1	0	0	20	0	203	51	.....	.....	14	2	.....	O	18,000	1,500	2,000	1,500	38,700	.....
Decatur	Agnes Scott College	.....	.....	0	217	0	50	0	82	0	302	0	132	15	3	120	O	25,624	6,691	.....	8,109	94,711	35,150
Demorest	Piedmont College	89	84	22	23	0	0	0	0	111	107	.....	.....	15	4½	124	O	8,575	3,300	1,200	34,000	34,719	11,000
Forsyth	Bessie Tift College	0	64	0	109	0	25	0	32	0	346	0	70	14	2	120	O	20,000	1,000	2,000	22,000	56,000	87,000
Gainesville	Brenau College	0	0	0	149	0	11	0	49	0	375	.....	.....	15	3	120	O	13,460	4,274	7,360	18,873	151,860	27,000
Oxford	Emory University	0	0	145	0	63	0	36	0	244	0	70	0	14	4	134	O	26,858	3,191	700	2,167	.....	65,500
Rome	Shorter College	0	56	0	115	0	10	0	35	0	216	.....	.....	15	3	120	O	.....	.....	.....	.....	70,560	.....
IDAHO.																							
Moscow	University of Idaho	0	0	104	176	26	12	4	35	321	223	58	67	15	1	128	O	58,297	35,610	1,262	17,180	264,867	0
ILLINOIS.																							
Aurora	Aurora College	23	13	17	13	0	0	22	19	62	45	.....	.....	15	2	120	O	.....	.....	.....	.....	.....	.....
Bloomington	Illinois Wesleyan University.	26	41	108	110	16	9	.....	.....	250	160	.....	.....	15	1	128	O	15,400	8,600	2,000	12,570	49,851	0
Carlinville	Blackburn College	41	19	45	27	0	0	0	0	86	46	.....	.....	15	2	128	O	8,000	1,500	2,000	200	14,618	13,000
Chicago	De Paul University	220	125	24	229	1	1	11	94	523	528	23	165	15	1	130	O	.....	3,189	.....	.....	53,434	.....
Do	Loyola University	771	0	121	0	0	0	0	0	1,347	0	111	0	16	1	140	O	.....	.....	.....	.....	.....	.....
Decatur	James Millikin University.	30	36	114	159	9	6	8	40	247	523	66	93	15	1	130	O	41,157	6,822	2,916	10,798	96,588	0
Galesburg	Knox College	.....	.....	200	176	15	7	17	22	278	436	116	93	15	1½	120	O	30,653	16,059	.....	7,814	71,155	89,000
Jacksonville	Illinois Woman's College	0	62	0	162	0	0	0	14	0	238	0	85	15	1	120	O	21,032	18,795	5,724	16,021	104,984	0
Lake Forest	Lake Forest College	0	0	99	89	1	3	2	0	102	92	38	41	16	3	124	O	36,400	43,458	14,854	5,535	216,153	0
Mount Carroll	Frances Shimer School	0	81	0	33	0	0	0	0	0	114	0	15	15	1	60	X	12,000	3,675	460	2,350	43,823	30,000
Naperville	Northwestern College	56	18	158	82	0	0	2	9	256	200	60	49	15	1	128	O	16,000	3,910	2,482	2,353	40,082	55,000
Rockford	Rockford College	0	0	0	122	0	56	0	39	0	217	0	110	15	2	120	O	19,268	17,225	2,306	13,858	92,189	13,000
Rock Island	Augustana College	85	59	124	52	0	0	12	9	221	120	77	30	15	1	120	O	21,809	8,635	7,200	5,052	99,914	69,075
INDIANA.																							
Bloomington	Indiana University	0	0	1,330	799	0	0	173	968	2,091	1,062	.....	.....	16	0	121	O	241,311	91,935	89,844	33,984	615,000	0
Crawfordsville	Wabash College	0	0	319	0	2	0	13	0	334	0	119	0	16	1½	128	O	35,641	4,957	1,290	3,567	58,437	0
Earlham	Earlham College	0	0	139	163	22	16	9	23	180	251	7	4	15	.....	120	O	36,662	12,922	6,477	17,000	127,551	.....
Franklin	Franklin College	.....	.....	117	119	2	2	4	10	123	131	55	58	16	.....	128	O	14,206	12,168	.....	6,052	48,253	0
Greencastle	De Pauw University	.....	.....	361	356	1	5	5	17	398	594	65	61	15	1	120	O	54,261	15,257	80,757	14,950	127,726	0
Indianapolis	Butler College	0	0	111	194	49	40	8	15	168	249	71	94	15	3	120	O	30,085	3,010	.....	7,582	45,314	.....
Notre Dame	University of Notre Dame.	495	0	254	0	8	0	12	0	1,158	0	250	0	16	3	128	O	31,750	28,650	15,000	.....	.....	0
Upland	Taylor University	88	37	65	44	.....	.....	3	5	163	87	28	15	15	2	186	O	5,800	2,182	18,850	1,675	47,135	34,500

TABLE 1.—*Colleges of arts and sciences, 1915–16.* PART II: *Students, expenditures, and receipts*—Continued.

Location.	Institution.	Students, requirements, degrees, and courses.																Expenditures for 1914–15.				Receipts for 1914–15, exclusive of additions to endowments.	Debt.
		Preparatory.		Regular.		Conditioned.		Special.		Total (including professional and special departments).		High school graduates entering in 1915.		Number of standard units required for admission.	Maximum number of entrance conditions allowed.	Number of semester hours required for bachelor's degree.	Junior college. (X=Yes; O=No.)	Salaries of college teachers.	Maintenance.	Increase of plant and lasting improvements.	Administration, including handling of institution's funds.		
		Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.										
1	2	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
IOWA.																							
Cedar Falls	Iowa State Teachers College.	.....	.....	231	1,561	.....	.....	9	18	242	1,624	.....	.....	15	1½	120	O	$147,296	$56,627	$85,075	$22,346	$331,865	0
Cedar Rapids	Coe College	22	4	218	248	10	1	2	8	274	367	100	100	15	1	124	O	29,734	4,140	67,350	6,800	63,452	$260,000
Clinton	Wartburg College	46	0	28	0	0	0	0	0	74	0	.....	.....	15	.....	.....	.....	.....	.....	.....	.....	19,797	.....
Des Moines	Des Moines College	27	43	96	129	0	0	0	0	148	206	30	44	15	1½	120	O	12,000	5,600	.....	3,000	56,229	80,000
Do	Drake University	0	0	220	190	10	0	30	42	508	1,014	81	42	15	1	120	O	40,000	19,560	5,000	10,000	189,718	283,000
Fairfield	Parsons College	25	15	78	68	3	6	0	0	106	89	42	24	15	1	120	O	12,500	4,908	21,318	4,718	40,902	61,875
Iowa City	State University of Iowa.	0	0	676	674	101	45	35	46	1,767	882	316	300	15	1	120	O	193,528	174,626	284,956	28,313	986,513	0
Mount Vernon	Cornell College	42	44	234	310	0	0	0	0	369	553	98	106	15	1	124	O	32,050	568	2,726	10,393	132,079	0
Pella	Central University of Iowa.	18	5	29	31	0	0	0	2	69	78	8	12	15	.....	128	O	10,365	2,003	800	1,500	18,850	6,744
Sioux City	Morningside College	51	39	155	221	.....	.....	2	23	274	525	65	90	15	2	120	O	20,600	6,585	3,725	6,000	46,344	.....
Storm Lake	Buena Vista College	8	9	27	34	2	2	0	0	37	45	9	13	15	.....	120	O	8,350	1,939	.....	3,000	20,072	50,000
KANSAS.																							
Atchison	Midland College	30	24	35	39	2	1	8	15	104	134	15	12	15	1	120	O	12,200	2,400	38,000	2,500	25,000	1,200
Emporia	College of Emporia	0	0	117	120	2	0	1	3	133	211	53	57	15	1	120	O	22,820	16,266	2,903	4,135	39,549	61,635
Ottawa	Ottawa University	51	41	94	103	0	0	0	7	145	151	43	38	15	1	120	O	12,912	4,260	35,000	3,489	38,978	38,900
Salina	Kansas Wesleyan University.	36	34	84	90	0	0	0	0	138	207	31	47	15	1	120	O	14,200	3,000	2,000	250	20,045	19,000

																						21,453	8,000
Sterling	Cooper College	4	0	55	54	0	0	5	2	126	206	15	15	15	2	122	O	11,468	965	.....	.....	78,753	60,000
Topeka	Washburn College	38	46	165	177	12	7	19	41	371	507	73	88	15	1	120	O	23,839	11,141	.....	8,608	43,615	.....
Winfield	Southwestern College	20	15	130	98	0	0	22	26	214	211	.....	.....	15	1	120	O	10,575	.....	.....	5,792		
KENTUCKY.																							
Bowling Green	Ogden College	75	0	50	0	0	0	5	0	75	0	15	0	15	2	120	O	6,000	1,600	200	12,000	11,018	0
Danville	Centre College	40	0	147	0	0	0	0	0	187	0	.....	.....	15	2	128	O	19,000	6,200	3,500	3,000	.....	.....
Georgetown	Georgetown College	38	36	135	92	7	4	15	13	198	174	(9	1)	15	3	128	O	12,450	4,450	0	5,900	41,212	22,000
Lexington	University of Kentucky	555	60	154	127	3	4	5	25	717	226	.....	.....	15	2	120	O	9,175	11,268	5,000	11,620	321,062	30,552
Do	Transylvania College	0	0	141	79	13	2	9	7	163	88	62	41	15	2	120	O	12,200	5,926	30,257	4,154	48,529	.....
Louisville	University of Louisville	0	0	97	136	7	9	25	28	353	282	62	69	16	2	120	O	33,018	5,281	0	1,360	79,250	0
Russellville	Bethel College	.....	.....	28	0	2	0	0	0	30	0	16	0	15	2	130	O	4,177	428	1,563	1,542	12,490	8,569
LOUISIANA.																							
New Orleans	H. Sophie Newcomb Memorial College.	0	0	0	218	0	42	0	13	4	553	0	107	15	2	122	O	53,270	11,469	3,706	9,095	166,936	0
Do	Loyola University	0	0	27	0	1	0	17	0	227	0	21	0	15	3	144	O	.....	.....	.....	.....	.....	.....
MAINE.																							
Brunswick	Bowdoin College	0	0	400	0	0	0	0	0	400	0	123	0	14½	2	117	O	65,101	42,588	9,476	6,850	151,563	0
Lewiston	Bates College	0	0	234	184	18	4	32	0	284	188	105	58	14½	4	122	O	44,896	21,718	0	9,371	89,809	3,500
Orono	University of Maine	0	0	177	81	0	0	8	0	662	82	57	23	14½	2	125	O	134,097	46,895	59,648	11,308	364,052	108,842
MARYLAND.																							
Annapolis	St. John's College	.....	.....	127	0	20	0	13	0	160	0	24	0	14	2	144	O	17,000	5,084	2,113	750	53,000	0
Baltimore	Goucher College	0	0	0	379	0	97	0	32	0	508	0	204	15	3	120	O	44,741	28,423	118,004	11,520	212,569	0
Do	Johns Hopkins University.	0	0	133	0	42	0	20	0	324	0	.....	.....	15	.....	125	O	353,933	210,310	501,786	20,817	628,830	0
Do	Morgan College (colored)	40	25	27	15	0	0	0	7	67	47	2	5	16	2	128	O	6,675	2,318	1,845	1,900	34,213	25,000
Chestertown	Washington College	30	6	82	7	0	0	0	0	112	13	32	3	14	2	124	O	13,000	4,200	0	700	62,795	5,000
Ellicott City	Rock Hill College	80	0	40	0	4	0	0	0	120	0	14	0	14	2	.....	O	0	3,600	2,000	24,000	26,000	0
Frederick	Hood College	.....	.....	0	99	0	0	0	29	0	128	.....	.....	15	2	120	O	18,075	3,762	75,029	1,605	71,840	111,700
Lutherville	Maryland College for Women	0	4	0	77	0	7	0	5	0	93	0	38	13½	2	.....	O	8,100	3,532	3,500	.....	.....	40,000
MASSACHUSETTS.																							
Amherst	Amherst College	0	0	391	0	0	0	31	0	422	0	.....	.....	14	2½	129	O	.....	.....	.....	.....	221,817	.....
Boston	Boston University	0	0	80	300	26	68	24	48	104	348	62	169	15	3	120	O	48,333	5,535	3,144	2,612	222,474	.....
Cambridge	Harvard University	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	16½	2	.....	O	550,723	.....	442,784	92,683	3,019,602	0
Northampton	Smith College	0	0	0	1,725	0	135	0	0	0	1,725	0	333	14½	2	120	O	229,159	116,418	42,739	37,057	736,734	.....
Norton	Wheaton College	0	0	0	167	0	0	0	39	0	206	.....	.....	15	2	118	O	24,476	28,671	1,200	8,240	119,676	0
South Hadley	Mount Holyoke College	0	0	0	781	0	0	0	2	0	783	0	229	15	.....	120	O	105,877	30,024	.....	233,083	336,998	.....
Tufts College	Tufts College	0	0	180	96	26	0	10	0	1,410	131	75	0	15	2½	122	O	.....	.....	.....	.....	301,955	0
Worcester	Clark College	0	0	166	0	0	0	11	0	177	0	.....	.....	15	0	108	O	43,700	33,200	0	6,680	85,250	0
MICHIGAN.																							
Alma	Alma College	0	0	87	86	0	0	1	4	88	90	30	32	15	2	120	O	17,861	8,579	200	2,800	54,673	66,310
Ann Arbor	University of Michigan	0	0	2,067	928	0	0	31	199	5,025	1,259	.....	.....	15	0	120	O	326,906	223,425	472,747	126,651	2,321,241	0

TABLE 1.—*Colleges of arts and sciences, 1915–16.* PART II: *Students, expenditures, and receipts*—Continued.

Location.	Institution.	Students, requirements, degrees, and courses.																Expenditures for 1914–15.				Receipts for 1914–15, exclusive of additions to endowments.	Debt.
		Preparatory.		Regular.		Conditioned.		Special.		Total (including professional and special departments).		High school graduates entering in 1915.		Number of standard units required for admission.	Maximum number of entrance conditions allowed.	Number of semester hours required for bachelor's degree.	Junior college. (X=Yes; O=No.)	Salaries of college teachers.	Maintenance.	Increase of plant and lasting improvements.	Administration, including handling of institution's funds.		
		Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.										
1	2	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
MINNESOTA.																							
Collegeville	St. John's University	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	16	.....	128	O	.....	.....	.....	.....	.....	.....
Minneapolis	Augsburg Seminary	93	0	31	0	0	0	0	0	123	0	4	0	15	.....	144	O	15,209	$1,016	$927	$1,500	$21,007	$15,000
Northfield	Carleton College	0	0	211	235	0	0	0	0	219	266	81	85	15	0	120	O	53,698	25,217	95,350	13,945	204,584	51,161
St. Paul	Hamline University	0	0	222	194	0	0	2	0	224	194	108	85	15	3	120	O	30,350	13,750	7,000	8,415	63,264	0
Do	Macalester College	3	8	158	135	1	2	0	0	177	184	60	63	15	1½	127	O	24,554	5,922	665	5,846	55,796	0
Do	College of St. Catherine	0	130	0	125	0	8	0	8	0	351	0	63	15	.....	120	O	35,000	12,847	53,000	10,000	.....	120,000
St. Peter	Gustavus Adolphus College.	21	23	102	64	0	0	2	0	183	187	28	24	15	1	130	O	13,938	.....	1,682	2,760	42,295	35,000
Winona	College of St. Teresa	0	100	0	140	0	0	0	0	0	240	.....	.....	16	.....	120	O	15,000	.....	.....	.....	72,500	200,000
MISSISSIPPI.																							
Clinton	Mississippi College	56	0	314	0	10	0	0	0	425	0	.....	.....	14	2	64	O	.....	.....	.....	.....	60,293	.....
Meridian	Meridian College	13	19	75	150	0	0	29	78	155	500	.....	.....	14	2	120	O	.....	.....	.....	.....	.....	.....
University	University of Mississippi	.....	.....	269	75	26	3	34	6	547	84	.....	.....	14	2	130	O	40,000	17,800	13,000	9,000	.....	23,000
MISSOURI.																							
Columbia	Stephens College	0	18	0	127	0	0	0	0	0	297	0	74	15	1	60	X	9,786	2,795	4,238	4,411	49,000	20,000
Fulton	Westminster College	43	0	106	0	0	0	13	0	162	0	49	0	15	1	132	O	12,610	3,139	0	3,030	.....	31,300
Liberty	William Jewell College	190	0	279	0	0	0	0	0	469	0	.....	.....	15	2	124	O	21,491	8,114	56,338	8,015	84,047	64,000
Parkville	Park College	96	70	215	212	9	10	0	0	236	258	55	50	15	2	140	O	23,350	6,740	2,328	.....	91,708	9

St. Charles	Lindenwood Female College.	0	86	0	43	0	3	0	40	0	172	0	60	15	2	60	X	7,500	4,863	100,000	550	128,307	0
St. Louis	Forest Park College	0	45	0	30	0	0	0	0	0	175	0	30	15	1	120	O	.....	.....	.....	.....	.....	.....
Do	St. Louis University	397	0	223	0	0	0	0	0	1,546	0	109	0	16	2	136	O	.....	.....	.....	.....	.....	.....
Do	Washington University	0	0	139	211	27	33	36	26	873	439	89	113	15	1	120	O	260,448	212,709	185,049	17,839	716,471	.....
Springfield	Drury College	0	0	129	131	5	2	6	14	152	160	66	63	15	1	124	O	26,225	10,715	0	5,225	54,084	0
Warrenton	Central Wesleyan College	101	10	8 59	32	0	0	1	3	235	214	18	15	16	2	128	O	8,750	3,550	1,000	2,000	24,607	39,000
MONTANA.																							
Missoula	University of Montana	0	0	128	202	3	4	18	32	323	291	61	83	15	2	122	O	64,995	43,433	2,261	16,925	215,945	.....
NEBRASKA.																							
Bellevue	Bellevue College	34	29	29	33	0	0	1	4	65	77	29	33	15	1	128	O	11,500	5,550	23,500	7,000	36,155	24,000
College View	Union College	82	79	64	51	0	0	0	0	100	133	36	39	16	0	160	O	8,381	2,816	.....	12,596	66,159	0
Crete	Doane College	2	1	63	51	3	7	4	5	80	97	31	27	15	3	124	O	17,670	5,912	15	3,742	45,448	40,765
Lincoln	University of Nebraska	.....	.....	838	755	55	41	47	130	1,859	1,206	371	292	15	1	125	O	250,578	97,320	10,000	106,807	1,368,039	0
NEW HAMPSHIRE.																							
Durham	New Hampshire College of Agriculture and Mechanic Arts.	0	0	79	102	41	18	4	3	123	113	36	45	15	.....	132	O	64,500	7,870	27,000	12,000	273,236	0
NEW JERSEY.																							
Convent Station	College of St. Elizabeth	0	260	0	101	0	5	0	4	0	395	0	42	15	2	132	O	10,000	10,940	100,000	.....	48,675	.....
Kenilworth	Upsala College	34	3	7	5	0	0	1	1	59	40	2	2	15	2	125	O	8,861	2,011	2,875	1,211	13,158	21,620
NEW MEXICO.																							
Albuquerque	University of New Mexico.	10	4	67	51	0	0	14	15	130	84	33	24	15	2	120	O	35,450	9,950	7,000	800	62,577	0
NEW YORK.																							
Albany	New York State College for Teachers.	80	138	115	647	0	0	49	208	257	1,038	55	260	15	1	124	O	9,432	19,185	2,000	5,700	110,103	0
Alfred	Alfred University	0	0	50	64	18	13	8	6	76	83	27	27	15	2	128	O	21,787	8,659	1,050	6,724	36,307	0
Annandale	St. Stephen's College	10	0	39	0	0	0	13	0	62	0	5	0	14½	2½	128	O	17,000	2,250	35,000	35,000	40,546	40,000
Aurora	Wells College	0	0	0	201	0	15	0	1	0	228	0	78	14½	2	115	O	40,289	37,099	2,802	10,213	146,774	40,000
Canton	St. Lawrence University	0	0	129	128	0	0	3	9	132	137	45	29	15	2	120	O	23,789	2,802	0	3,711	236,341	2,000
Elmira	Elmira College	0	0	0	278	0	0	0	0	0	278	0	93	15	1	120	O	32,733	6,585	2,808	.....	104,543	0
Geneva	Hobart College	0	0	120	94	16	2	0	0	136	96	57	28	14½	2	120	O	35,500	10,200	2,000	15,000	125,890	0
New Rochelle	College of New Rochelle	0	0	0	185	0	6	0	2	0	200	0	60	16	2	144	O	7,536	62,748	.....	.....	70,289	52,122
New York	Barnard College	0	0	0	565	0	68	0	61	0	694	0	190	15	.....	124	O	130,330	52,831	.....	15,211	262,423	0
Do	College of the City of New York.	1,621	0	1,811	0	323	0	95	0	3,850	0	546	0	15	2	128	O	319,324	108,194	55,988	17,336	526,108	0
Do	Columbia University	0	0	1,177	0	0	0	79	0	.....	0	357	0	14½	2½	120	O	1,252,658	482,517	25,345	1,407,745	4,204,937	0
Do	Hunter College of the City of New York.	0	0	0	1,943	0	0	0	0	0	1,943	0	405	15	1	120	O	287,546	30,949	.....	51,390	550,124	0
Do	New York University	0	0	272	0	0	0	6	0	278	0	77	0	15	3	126	O	52,261	29,870	17,556	1,893	630,415	645,000

TABLE 1.—*Colleges of arts and sciences, 1915–16.* PART II: *Students, expenditures, and receipts*—Continued.

Location.	Institution.	Students, requirements, degrees, and courses.																Expenditures for 1914–15.				Receipts for 1914–15, exclusive of additions to endowments.	Debt.
		Preparatory.		Regular.		Conditioned.		Special.		Total (including professional and special departments).		High school graduates entering in 1915.		Number of standard units required for admission.	Maximum number of entrance conditions allowed.	Number of semester hours required for bachelor's degree.	Junior college. (X=Yes; O=No.)	Salaries of college teachers.	Maintenance.	Increase of plant and lasting improvements.	Administration, including handling of institution's funds.		
		Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.										
1	2	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
NEW YORK—continued.																							
Poughkeepsie	Vassar College	0	0	0	1,127	0	0	0	0	0	1,127	0	319	15½	2	120	O	$181,498	$41,687	$104,590	$36,745	$779,460	.....
Rochester	University of Rochester	0	0	271	187	18	21	17	16	306	224	101	71	15	.....	184	O	78,232	26,278	68,924	22,959	139,996	.....
Schenectady	Union University	0	0	470	0	51	0	0	0	521	0	175	0	14	2	.....	O	65,379	20,802	2,536	8,601	140,117	0
NORTH CAROLINA.																							
Chapel Hill	University of North Carolina.	0	0	441	2	71	0	32	3	738	5	146	0	14	2	120	O	75,639	28,795	39,000	9,430	261,658	0
Davidson	Davidson College	0	0	357	0	0	0	0	0	357	0	.....	.....	14	2	65	O	27,185	5,525	800	6,000	51,830	0
Durham	Trinity College	0	0	424	89	95	13	4	0	441	89	.....	.....	14	2	122	O	63,141	8,870	.....	12,498	126,304	0
Elon College	Elon College	44	28	187	98	.....	.....	12	9	315	240	88	51	14	2	128	O	15,800	7,707	2,640	3,050	54,986	$52,515
Guilford College	Guilford College	3	33	80	48	10	12	4	3	132	91	26	14	14	2	126	O	12,150	1,850	.....	1,200	43,600	60,000
Raleigh	Shaw University (colored).	103	130	39	9	88	110	25	35	113	260	3	0	15	2	.....	O	.....	.....	.....	.....	37,257	.....
Weaverville	Weaver College	40	19	27	6	0	0	0	0	67	25	.....	.....	14	.....	.....	X	4,800	897	.....	.....	273,267	13,200
Winston-Salem	Salem Academy and College.	0	140	0	127	0	20	0	42	0	421	0	48	14	2	120	O	19,370	11,969	.....	2,778	113,367	0

NORTH DAKOTA.																							
University	University of North Dakota.	60	57	138	88	11	4	17	24	480	392	78	40	15	1	.....	O	115,200	47,263	.....	26,981	268,497	38,500
OHIO.																							
Akron	Municipal University of Akron.	0	0	127	58	10	1	6	14	143	73	49	18	15	1	128	O	28,128	12,127	2,480	6,949	65,833	5,346
Athens	Ohio University	0	0	320	123	15	6	66	90	401	219	87	33	15	1	120	O	36,150	20,251	17,993	13,380	419,250	0
Berea	Baldwin-Wallace College	186	17	126	94	.....	.....	10	14	633	295	35	39	15	2	120	O	24,341	5,976	.....	2,417	46,447	52,650
Bluffton	Bluffton College	24	24	45	56	.....	.....	7	8	155	179	21	31	15	.....	120	O	20,720	1,200	.....	.....	10,456	70,000
Cedarville	Cedarville College	.....	.....	26	28	10	4	.....	.....	39	63	8	10	16	.....	120	O	6,168	1,172	.....	933	7,708	.....
Cincinnati	University of Cincinnati.	0	0	292	533	0	0	209	347	1,247	1,225	.....	.....	16	2	124	O	124,605	71,508	42,122	44,714	867,985	.....
Cleveland	Western Reserve University.	0	0	398	418	15	19	10	17	441	565	.....	.....	15	2	124	O	138,922	15,487	.....	.....	438,278	0
Columbus	Capital University	95	0	97	0	9	0	12	0	213	0	34	0	15	2	140	O	17,450	1,557	30,590	2,200	24,883	.....
Dayton	St. Mary College	.....	.....	70	0	0	0	0	0	100	0	23	0	15	.....	120	O	.....	.....	.....	.....	.....	.....
Defiance	Defiance College	34	28	95	116	4	0	0	0	164	231	30	45	15	1	120	O	15,259	1,534	9,892	12,903	41,688	20,000
Delaware	Ohio Wesleyan University.	21	7	474	406	27	13	44	45	573	597	148	143	15	2	120	O	66,777	28,529	5,300	16,148	145,300	.....
Gambier	Kenyon College	0	0	131	0	11	0	8	0	151	0	52	0	15	2	128	O	21,688	10,919	2,368	4,750	66,841	18,000
Marietta	Marietta College	0	0	182	54	2	0	2	15	186	69	76	21	15	0	128	O	22,795	5,052	1,505	7,000	42,929	0
New Concord	Muskingum College	70	87	150	108	0	0	0	0	416	242	50	31	15	2	128	O	10,061	5,043	9,358	5,813	50,016	97,000
Oxford	Miami University	0	0	336	169	0	0	3	1	361	429	.....	.....	15	1	120	O	53,050	25,704	26,837	9,217	326,734	0
Do	Oxford College for Women.	0	0	0	125	0	3	0	2	0	246	0	60	15	1	124	O	12,000	4,902	1,500	7,438	52,127	15,155
Do	Western College for Women.	0	0	0	263	0	0	0	0	0	263	0	103	15	1	120	O	26,752	11,744	8,795	8,850	112,384	.....
Painesville	Lake Erie College	0	0	0	139	0	0	0	1	0	150	0	54	15	1	120	O	25,220	9,392	6,336	12,337	76,189	15,000
Rio Grande	Rio Grande College	95	73	30	25	0	0	0	0	130	128	.....	.....	15	.....	120	O	4,000	1,150	1,500	1,000	8,200	3,000
Westerville	Otterbein University	33	20	154	105	10	5	0	2	233	271	45	90	15	.....	128	O	19,470	7,584	750	3,824	59,196	36,770
Wooster	College of Wooster	121	96	278	201	18	14	3	3	464	401	115	78	15	1	124	O	50,971	22,018	45,970	10,045	15,172	3,434
OKLAHOMA.																							
Guthrie	Methodist University of Oklahoma.	25	18	31	15	2	0	3	13	102	131	14	6	15	2	120	O	10,000	1,810	50	3,215	14,315	4,000
Kingfisher	Kingfisher College	.....	.....	22	16	2	0	1	0	25	16	6	2	15	1	128	O	9,600	2,435	1,688	511	17,268	.....
Norman	University of Oklahoma.	0	0	566	351	0	0	126	187	1,062	615	.....	.....	15	1	124	O	72,451	59,210	7,723	35,306	231,147	0
OREGON.																							
Albany	Albany College	7	13	29	27	0	0	2	4	43	98	17	15	15	2	120	O	11,450	3,395	469	3,409	22,225	54,000
Forest Grove	Pacific University	0	0	48	44	3	4	3	5	62	130	17	22	15	1	120	O	11,270	5,542	1,564	4,852	31,802	45,000
McMinnville	McMinnville College	64	32	44	30	6	6	0	4	132	125	23	16	15	1	160	O	13,975	1,328	.....	7,020	27,247	30,664
Newberg	Pacific College	22	20	22	17	0	0	0	9	52	94	9	17	15	.....	135	O	8,750	1,050	1,000	3,482	7,500	21,570
Portland	Reed College	0	0	110	147	0	0	0	0	110	147	.....	.....	15	0	.....	O	44,325	17,200	.....	6,000	122,859	0
Salem	Willamette University	34	12	100	115	0	0	12	3	192	194	44	48	15	2	124	O	12,000	3,375	900	5,540	39,080	28,000
PENNSYLVANIA.																							
Bethlehem	Moravian College	.....	.....	31	0	0	0	0	0	34	0	9	0	17½	2	120	O	9,500	1,435	3,000	.....	33,402	0
Bryn Mawr	Bryn Mawr College	.....	.....	0	451	0	57	0	2	0	453	.....	.....	20	5	120	O	110,135	60,940	17,327	28,653	380,562	51,265

TABLE 1.—*Colleges of arts and sciences, 1915–16.* PART II: *Students, expenditures, and receipts*—Continued.

Location.	Institution.	Students, requirements, degrees, and courses.																Expenditures for 1914–15.					
		Preparatory.		Regular.		Conditioned.		Special.		Total (including professional and special departments).		High school graduates entering in 1915.		Number of standard units required for admission.	Maximum number of entrance conditions allowed.	Number of semester hours required for bachelor's degree.	Junior college. (X=Yes; O=No.)	Salaries of college teachers.	Maintenance.	Increase of plant and lasting improvements.	Administration, including handling of institution's funds.	Receipts for 1914–15, exclusive of additions to endowments.	Debt.
		Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.										
1	2	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
PENNSYLVANIA—contd.																							
Beaver	Beaver College	0	21	0	37	0	0	0	13	0	120	.....	.....	15	.....	120	O	$9,354	.....	.....	$3,408	$24,667	.....
Chambersburg	Wilson College	0	0	0	162	0	0	0	10	0	195	0	52	14½	2	120	O	13,350	$1,501	$4,189	8,370	65,416	$13,000
Easton	Lafayette College	0	0	472	0	0	0	5	0	477	0	.....	.....	14½	2	130	O	80,037	42,895	6,051	5,070	130,484	126,232
Gettysburg	Pennsylvania College	74	6	280	14	12	1	33	1	399	22	112	2	15	2	128	O	26,350	15,399	3,000	5,760	65,000	0
Haverford	Haverford College	0	0	161	0	6	0	19	0	186	0	51	0	14½	3	130	O	56,350	17,500	14,000	9,950	160,588	96,578
Lancaster	Franklin and Marshall College.	0	0	291	0	12	0	16	0	291	0	67	0	14½	2	130	O	29,184	6,354	2,900	6,631	47,705	0
Lincoln University.	Lincoln University (colored).	0	0	143	0	0	0	20	0	212	0	57	0	15	0	120	O	10,766	5,130	.....	1,462	35,951	21,709
Meadville	Allegheny College	0	0	230	163	0	0	11	1	241	164	84	54	15	2	120	O	40,283	31,033	8,609	8,527	102,568	11,882
Mechanicsburg	Irving Female College	0	6	0	31	0	0	0	0	0	107	.....	.....	13	3	140	O	10,820	1,550	500	1,000	35,541	.....
Myerstown	Albright College	18	8	96	25	25	3	10	0	160	78	15	7	16	.....	134	O	12,500	6,030	3,352	2,200	41,487	0
New Wilmington.	Westminster College	4	2	97	84	2	0	9	0	112	86	34	26	15	1	120	O	29,477	17,458	29,352	.....	69,914	80,000
Philadelphia	Drexel Institute	41	0	148	391	3	3	2	0	191	391	26	177	14½	2½	.....	O	.....	.....	.....	.....	95,138	.....
Do	University of Pennsylvania.	0	0	635	380	0	0	3	0	4,339	870	.....	.....	15	2	128	O	256,250	119,884	476,118	599,735	1,738,088	0
Selinsgrove	Susquehanna University	54	18	110	15	8	7	10	6	192	111	37	5	14	5	120	O	18,000	7,400	6,000	4,000	31,600	50,000
State College	Pennsylvania State College.	.....	.....	144	29	0	0	8	11	152	40	51	10	14	0	136	O	408,059	70,877	228,576	50,502	941,300	.....
		.....	.....	179	2	0	0	1	0	180	2	179	2	14	0	160	O						
Swarthmore	Swarthmore College	0	0	125	230	0	0	1	5	214	237	46	70	14½	2	124	O	70,400	52,485	10,038	17,602	227,009	0

Washington	Washington and Jefferson College.	0	0	311	0	15	0	7	0	333	0	.....	.....	14½	2	124	O	28,835	14,299	.....	9,900	68,941	118,323
Waynesburg	Waynesburg College	0	0	49	55	0	0	0	0	49	132	17	17	15	.....	136	O	9,000	600	.....	2,250	20,685	2,000
SOUTH CAROLINA.																							
Charleston	College of Charleston	0	0	69	0	7	0	4	0	80	0	29	0	14	2	122	O	12,100	3,882	2,000	1,500	22,102	0
College Place	Columbia College	0	4	0	123	0	0	0	100	0	392	0	70	14	2	.....	O	.....	.....	.....	.....	.....	.....
Columbia	University of South Carolina.	0	0	281	14	9	0	42	18	507	32	124	11	11	1	138	O	57,234	17,051	13,000	30,200	142,227	0
Greenville	Furman University	0	0	192	0	0	0	13	0	205	0	.....	.....	12	0	130	O	.....	.....	.....	.....	49,447	.....
Spartanburg	Converse College	0	0	0	153	0	0	0	50	0	406	.....	.....	14½	2	120	O	17,207	10,576	4,000	5,457	74,567	0
Do	Wofford College	0	0	288	0	32	0	4	0	324	0	86	0	14	2	132	O	23,213	5,256	.....	3,375	39,578	42,486
SOUTH DAKOTA.																							
Vermilion	University of South Dakota.	0	0	126	152	0	0	24	71	315	289	36	63	15	2	128	O	73,086	89,970	.....	7,920	194,772	0
TENNESSEE.																							
Bristol	King College	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	14	2	124	.....	.....	.....	.....	.....	.....	.....
Chattanooga	University of Chattanooga.	0	0	94	60	0	0	14	17	108	77	.....	.....	14½	.....	120	O	17,200	.....	63,345	5,500	49,917	22,000
Greeneville	Tusculum College	75	44	31	31	11	0	3	17	134	148	.....	.....	15	2	128	O	7,775	5,958	28,618	4,624	64,011	0
Knoxville	Knoxville College (colored).	96	74	26	14	0	0	0	1	130	167	18	8	15	2	125	.....	22,689	4,605	4,118	2,314	41,588	10,366
Milligan	Milligan College	45	14	98	42	0	0	0	0	149	52	12	10	15	.....	128	.....	6,000	1,200	500	12,500	.....	7,000
Murfreesboro	Tennessee College	0	104	0	53	0	24	0	17	0	304	0	48	14	2	120	O	7,975	1,549	.....	12,178	52,536	23,077
Nashville	Fisk University (colored)	93	84	83	90	12	13	11	10	213	324	12	12	15	1	140	O	16,517	9,016	1,025	8,069	54,242	0
Do	George Peabody College for Teachers.	0	0	413	1,099	.....	.....	.....	.....	413	1,099	.....	.....	.....	.....	186	O	78,930	15,664	1,352,646	13,328	169,243	0
Do	Vanderbilt University	0	0	250	62	36	18	10	10	80	72	131	27	14	2	128	O	58,000	9,300	9,000	109,000	268,292	0
Sewanee	University of the South	0	0	160	0	0	0	0	0	180	0	.....	.....	14	2	140	O	20,229	1,869	30,024	9,838	131,736	325,416
TEXAS.																							
Austin	University of Texas	0	0	674	677	126	82	82	52	1,682	1,201	275	237	14	2	120	O	239,107	47,748	13,271	31,373	602,609	0
Brownwood	Howard Payne College	90	54	62	36	0	0	3	13	165	139	21	19	14	2	120	O	10,500	6,000	.....	.....	22,000	50,000
Houston	Rice Institute	0	0	264	119	0	0	0	0	264	119	.....	.....	14	2	120	O	54,108	34,534	300,790	27,035	529,000	0
Sherman	Austin College	37	0	108	0	0	0	2	0	145	0	36	0	14	2	122	O	15,100	3,600	50,000	.....	82,880	100,000
Waco	Baylor University	.....	.....	232	197	88	52	23	19	410	378	.....	.....	14	2	120	O	37,642	19,002	.....	15,181	148,919	42,940
UTAH.																							
Salt Lake City	University of Utah	44	76	459	469	305	369	0	0	808	914	.....	.....	15	2	122	O	175,135	49,457	1,250	9,300	241,919	0
VERMONT.																							
Middlebury	Middlebury College	0	0	187	156	0	0	0	0	187	156	67	50	14	2	120	O	43,447	8,610	34,838	10,965	126,925	0
Winooski	St. Michael's College	80	0	20	0	0	0	0	0	115	0	4	0	15	3	140	O	.....	.....	.....	.....	.....	.....

TABLE 1.—*Colleges of arts and sciences, 1915–16.* PART II: *Students, expenditures, and receipts*—Continued.

Location.	Institution.	Students, requirements, degrees, and courses.																Expenditures for 1914–15.					
		Preparatory.		Regular.		Conditioned.		Special.		Total (including professional and special departments).		High school graduates entering in 1915.		Number of standard units required for admission.	Maximum number of entrance conditions allowed.	Number of semester hours required for bachelor's degree.	Junior college. (X=Yes; O=No.)	Salaries of college teachers.	Maintenance.	Increase of plant and lasting improvements.	Administration, including handling of institution's funds.	Receipts for 1914–15, exclusive of additions to endowments.	Debt.
		Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.										
1	2	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
VIRGINIA.																							
Bridgewater	Bridgewater College	40	22	41	28	0	0	0	0	84	75	8	11	14	2	120	O	$7,200	$1,691	$1,567	.....	$22,450	0
Charlottesville	University of Virginia	0	0	468	0	0	0	55	0	523	0	148	0	14	2	120	O	98,406	53,302	70,000	$33,241	444,315	$200,000
Danville	Roanoke Institute	0	100	0	26	0	5	0	0	0	188	0	8	15	2½	.....	X	.....	.....	.....	.....	.....	.....
Emory	Emory and Henry College.	62	0	176	0	0	0	0	0	238	0	.....	.....	14	2	128	O	.....	.....	.....	.....	53,254	.....
Hampden-Sidney	Hampden-Sidney College.	0	0	102	0	15	0	1	0	118	0	38	0	14	2	120	O	12,375	4,683	945	2,789	25,712	0
Hollins	Hollins College	0	84	0	106	0	0	0	28	0	218	0	45	14	2	120	O	11,450	8,753	28,946	926	107,489	.....
Lexington	Washington and Lee University.	0	0	331	0	24	0	14	0	511	0	116	0	14	2	126	O	39,801	16,271	44,683	16,292	104,759	0
Lynchburg	Randolph-Macon Woman's College.	0	0	0	503	0	84	0	121	0	632	0	241	15	2	120	O	53,735	12,965	2,636	9,737	202,900	42,000
Richmond	Richmond College	0	0	211	76	37	38	20	3	268	131	77	45	15	3	120	O	53,199	.....	.....	9,357	.....	.....
Do	Virginia Union University (colored).	228	0	59	6	5	0	3	1	62	7	22	5	15	2	160	O	6,000	8,538	500	500	38,113	3,000
Williamsburg	College of William and Mary.	64	0	178	0	0	0	0	0	242	0	50	0	14	2	120	O	24,400	3,938	27,308	3,560	53,550	18,000
WASHINGTON.																							
Seattle	University of Washington.	0	0	719	959	51	44	43	39	1,726	1,272	477	349	15	2	120	O	199,522	95,356	1,926	50,987	549,073	0
Spokane	Spokane	41	40	2	8	0	0	0	0	43	48	2	6	16	1	.....	X	5,000	971	500	8,400	.....	.....

WEST VIRGINIA.																							
Elkins	Davis and Elkins College	22	7	29	18	3	1	2	3	95	41	10	10	14	2	128	O	6,642	4,435	.....	4,089	16,600	18,508
WISCONSIN.																							
Appleton	Lawrence College	0	0	294	270	0	0	3	13	338	476	131	121	15	2	128	O	38,776	18,711	3,888	6,082	110,566	6,500
Beloit	Beloit	0	0	246	142	0	0	0	0	246	142	115	43	15	0	120	O	59,006	27,619	.....	15,118	138,298	0
Madison	University of Wisconsin	.....	.....	1,634	1,066	.....	.....	58	43	3,146	1,514	507	320	14	0	120	O	483,174	163,030	120,021	121,518	2,767,701	0
Milton	Milton College	8	13	28	33	2	1	3	5	56	80	14	15	15	2	128	O	9,233	2,845	5,790	244	20,835	2,200
Milwaukee	Concordia College	142	0	54	0	0	0	0	0	196	0	0	0	.....	.....	.....	X	10,680	3,275	4,500	.....	28,455	600
Do	Marquette University	.....	0	.....	0	0	0	0	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do	Milwaukee-Downer College.	0	0	0	190	0	10	0	34	0	347	0	96	15	1	120	O	21,870	16,507	17,132	10,654	131,164	.....
Plymouth	Mission House	36	2	35	1	0	0	3	0	97	3	4	0	15	.....	150	O	.....	.....	.....	.....	.....	.....
Prairie du Chien	Campion College	285	0	80	0	0	0	0	0	365	0	180	0	16	2	142	O	.....	.....	.....	.....	65,770	.....
Ripon	Ripon College	0	0	164	93	1	1	0	0	182	159	.....	.....	15	2	124	O	18,720	10,511	.....	47,611	60,784	.....
Sinsinawa	St. Clara College and Academy.	0	75	0	47	0	0	0	22	0	160	0	36	15	.....	120	O	.....	5,100	20,000	.....	43,179	45,000

FINANCIAL FOUNDATION.

Suggested Requirements I and II.—I. A college of arts and sciences should have an annual income of at least $40,000. At least three fifths of an income as small as $40,000 should be expended for salaries for teaching and administration. Exception is made of certain denominational institutions whose teaching staffs work without salaries.

II. A study of conditions at numerous substantial institutions indicates that college work of standard grade costs somewhere in the neighborhood of $200 a year per student. The minimum productive endowment for a college of arts and sciences should be $250,000. It is noted, however, that with advancing prices this amount should be rapidly increased; probably twice as much will be needed in the near future to give an institution the assurance of stability. Institutions should strive to bring their endowment to the point where it will yield at least half the money needed for annual expenses.

TABLE 2.—*Productive endowment, income, and debt, 1914–15.*

[Tax-supported institutions are marked with † and Roman Catholic institutions with *.]

Institutions.	Endowment.	Income.	Debt.
University of Alabama†	$627,467	$210,421	0
University of Arizona†	10,500	423,021	0
Central college, Arkansas		29,193	$24,000
Hendrix College, Arkansas	295,000	39,966	58,886
Pomona College, California	673,198	347,133	0
Occidental College, California	312,000	50,727	8,000
Mills College, California	486,310	80,774	0
University of Redlands, California	97,000	50,505	125,529
University of Santa Clara,* California		274,200	
Leland Stanford Junior University, California	23,975,338	1,235,891	0
University of Colorado†	83,000	300,436	0
Colorado College	1,042,592	148,887	0
University of Denver, Colorado	420,000	140,000	
Trinity College, Connecticut	1,226,801	83,835	5,000
Yale University, Connecticut	16,152,836	1,777,134	0
Gallaudet College, District of Columbia			
George Washington University, District of Columbia	136,340	220,954	0
Howard University (colored), District of Columbia	309,018	203,964	0
University of Florida†	219,650	170,297	0
Columbia College, Florida			25,000
Florida State College for Women†		97,885	0
University of Georgia†	372,270	286,302	0
Atlanta University (colored), Georgia	107,563	62,927	42,709
Cox College, Georgia		31,000	
North Georgia Agricultural College		38,700	
Agnes Scott College, Georgia	175,568	94,711	35,150
Piedmont College, Georgia	105,000	34,719	11,000
Bessie Tift College, Georgia	6,000	56,000	87,000
Brenau College, Georgia		151,860	27,000
Emory University, Georgia			65,500
Shorter College, Georgia	50,000	70,560	
University of Idaho†	666,346	264,867	0
Aurora College, Illinois			
Illinois Wesleyan University	373,729	49,851	0
Blackburn College, Illinois	248,813	14,618	13,000
De Paul University,* Illinois		53,434	
Loyola University,* Illinois			
James Millikin University, Illinois	208,777	96,588	0
Knox College, Illinois	504,463	71,155	89,000
Illinois Woman's College	123,155	104,984	0
Lake Forest College, Illinois	832,938	216,153	0
Frances Shimer School, Illinois	78,926	43,823	30,000
Northwestern College, Illinois	250,529	40,082	55,000
Rockford College, Illinois	208,976	92,189	13,000

TABLE 2.—*Productive endowment, income, and debt, 1914–15*—Continued.

[Tax-supported institutions are marked with † and Roman Catholic institutions with °.]

Institutions.	Endowment.	Income.	Debt.
Augustana College, Illinois	$441,764	$99,914	$69,075
Indiana University†	744,000	15,000	0
Wabash College, Indiana	739,800	57,702	0
Earlham College, Indiana	493,538	117,551	.....
Franklin College, Indiana	300,519	48,253	0
De Pauw University, Indiana	1,425,959	127,726	0
Butler College, Indiana	.....	45,314	.....
University of Notre Dame,° Indiana	.....	.....	0
Taylor University, Indiana	1,290	47,135	34,500
Iowa State Teachers College†	.....	331,865	0
Coe College, Iowa	750,000	63,452	260,000
Wartburg College, Iowa	19,000	19,797	.....
Des Moines College, Iowa	111,000	51,229	80,000
Drake University, Iowa	804,766	189,718	283,000
Parsons College, Iowa	235,176	38,217	61,875
State University of Iowa†	494,338	986,513	0
Cornell College, Iowa	861,223	132,079	0
Central University of Iowa	89,826	18,850	6,744
Morningside College, Iowa	400,000	46,344	.....
Buena Vista College, Iowa	25,000	20,072	50,000
Midland College, Kansas	85,000	25,000	1,200
College of Emporia, Kansas	112,000	36,549	61,635
Ottawa University, Kansas	236,786	38,978	38,900
Kansas Wesleyan University	115,000	20,045	19,000
Cooper College, Kansas	139,271	21,453	8,000
Washburn College, Kansas	363,377	78,753	60,000
Southwestern College, Kansas	130,000	43,615	.....
Ogden College, Kentucky	200,000	11,018	0
Centre College, Kentucky	.....	.....	.....
Georgetown College, Kentucky	275,000	41,215	22,000
University of Kentucky†	205,000	321,062	30,552
Transylvania College, Kentucky	319,612	41,270	.....
University of Louisville,† Kentucky	.....	79,250	0
Bethel College, Kentucky	63,800	12,490	8,569
H. Sophie Newcomb Memorial College, Louisiana	2,765,000	166,936	0
Loyola University,° Louisiana	.....	.....	.....
Bowdoin College, Maine	2,312,868	151,563	0
Bates College, Maine	749,993	89,809	3,500
University of Maine†	252,050	364,042	108,842
St. John's College, Maryland	.....	53,000	0
Goucher College, Maryland	473,831	212,569	0
Johns Hopkins University, Maryland	7,287,077	628,830	.....
Morgan College (colored), Maryland	56,000	34,213	25,000
Washington College, Maryland	.....	62,795	5,000
Rock Hill College,° Maryland	.....	26,000	0
Hood College, Maryland	42,500	71,840	111,700
Maryland College for Women	.....	.....	40,000
Amherst College, Massachusetts	2,736,058	221,817	0
Boston University, Massachusetts	1,308,869	222,474	0
Harvard University, Massachusetts	28,471,046	3,019,602	0
Smith College, Massachusetts	2,182,296	736,734	0
Wheaton College, Massachusetts	896,310	119,676	0
Mount Holyoke College, Massachusetts	1,426,173	336,998	0
Tufts College, Massachusetts	3,020,204	301,955	0
Clark College, Massachusetts	1,300,000	85,250	0
Alma College, Michigan	401,070	54,673	10,366
University of Michigan†	963,193	2,321,241	0
St. John's University,° Minnesota	.....	71,145	.....
Augsburg Seminary, Minnesota	32,570	21,007	15,000
Carleton College, Minnesota	871,937	204,584	51,161
Hamline University, Minnesota	842,000	63,264	0
Macalester College, Minnesota	468,739	55,796	0
College of St. Catherine,° Minnesota	.....	.....	120,000
Gustavus Adolphus College, Minnesota	265,000	42,295	35,000
College of St. Teresa,° Minnesota	.....	72,500	200,000
Mississippi College	125,000	60,293	.....
Meridian College, Mississippi	.....	.....	.....
University of Mississippi†	700,000	269,500	23,000
Stephens College, Missouri	40,000	49,000	20,000
Westminster College, Missouri	.....	.....	31,000
William Jewell College, Missouri	853,085	84,047	44,000
Park College, Missouri	453,876	91,708	0
Lindenwood College, Missouri	22,000	128,307	0
Forest Park College, Missouri	.....	.....	.....
St. Louis University, Missouri	.....	.....	.....
Washington University, Missouri	6,455,804	716,471	.....
Drury College, Missouri	250,000	54,084	0
Central Wesleyan College, Missouri	209,000	24,607	39,000
University of Montana†	.....	215,945	0

TABLE 2.—*Productive endowment, income, and debt, 1914–15*—Continued.

[Tax-supported institutions are marked with † and Roman Catholic institutions with *.]

Institutions.	Endowment.	Income.	Debt.
Bellevue College, Nebraska	$15,085	$36,155	$24,000
Union College, Nebraska	.....	66,159	0
Doane College, Nebraska	282,757	45,448	40,765
University of Nebraska†	787,255	1,368,039	0
New Hampshire College of Agriculture and Mechanic Arts†	950,000	273,236	0
College of St. Elizabeth,* New Jersey	.....	48,675	.....
Upsala College, New Jersey	.....	13,158	21,620
University of New Mexico†	.....	62,577	0
New York State College for Teachers†	.....	110,103	0
Alfred University, New York	411,963	36,307	0
St. Stephen's College, New York	102,733	40,546	40,000
Wells College, New York	404,400	146,774	40,000
St. Lawrence University, New York	747,940	236,341	2,000
Elmira College, New York	119,780	104,543	0
Hobart College, New York	750,073	125,890	0
College of New Rochelle,* New York	.....	70,289	52,122
Barnard College, New York	1,586,137	262,423	0
Columbia University, New York	30,900,471	4,204,937	0
College of the City of New York†	.....	526,108	0
Hunter College of the City of New York†	.....	550,124	0
New York University	1,393,805	630,415	645,000
Vassar College, New York	1,660,105	774,613	.....
University of Rochester, New York	1,650,629	139,996	0
Union University, New York	982,173	140,117	0
University of North Carolina†	148,594	261,658	109,85
Davidson College, North Carolina	285,000	51,830	0
Trinity College, North Carolina	1,395,292	118,829	0
Elon College, North Carolina	86,460	52,686	52,35
Guilford College, North Carolina	175,000	43,600	60,000
Shaw University (colored), North Carolina	51,122	37,257	.....
Weaver College, North Carolina	.....	.....	13,200
Salem Academy and College, North Carolina	170,266	113,367	38,500
University of North Dakota†	1,705,761	268,947	5,346
Municipal University of Akron,† Ohio	82,753	65,833	0
Ohio University†	150,000	419,250	52,650
Baldwin-Wallace College, Ohio	535,102	46,447	70,000
Bluffton College, Ohio	45,000	10,456	0
Cedarville College, Ohio	85,907	7,708	.....
University of Concinnati,† Ohio	869,671	867,985	.....
Western Reserve University, Ohio	3,526,608	438,278	0
Capital University, Ohio	145,309	24,883	.....
St. Mary College,* Ohio	.....	.....	.....
Defiance College, Ohio	273,266	41,688	20,000
Ohio Wesleyan University	990,100	145,300	.....
Kenyon College, Ohio	509,002	66,841	18,000
Marietta College, Ohio	556,428	42,929	0
Muskingum College, Ohio	123,124	50,016	97,000
Miami University,† Ohio	109,775	328,734	0
Oxford College for Women, Ohio	1,000	53,127	15,155
Western College for Women, Ohio	193,616	112,384	0
Lake Erie College, Ohio	244,852	76,189	15,000
Rio Grande College, Ohio	78,000	8,200	3,000
Otterbein University, Ohio	250,000	59,196	36,770
College of Wooster, Ohio	1,229,578	210,004	3,434
Methodist University of Oklahoma	65,000	14,315	4,000
Kingfisher College, Oklahoma	133,813	17,268	0
University of Oklahoma†	3,670,000	231,147	0
Albany College, Oregon	204,219	22,225	54,000
Pacific University, Oregon	224,554	31,802	45,000
McMinnville College, Oregon	60,450	27,247	30,665
Reed College, Oregon	3,000,000	122,850	0
Pacific College, Oregon	110,000	7,500	21,570
Willamette University, Oregon	516,555	39,080	28,000
Moravian College, Pennsylvania	108,352	33,402	0
Bryn Mawr College, Pennsylvania	2,002,300	280,562	51,265
Beaver College, Pennsylvania	12,000	24,667	0
Wilson College, Pennsylvania	71,475	65,416	13,000
Lafayette College, Pennsylvania	620,128	130,484	126,232
Pennsylvania College	390,000	65,000	0
Haverford College, Pennsylvania	2,000,268	160,588	96,578
Franklin and Marshall College, Pennsylvania	485,645	47,705	0
Lincoln University (colored), Pennsylvania	280,453	35,951	21,709
Allegheny College, Pennsylvania	425,000	102,568	11,882
Irving Female College, Pennsylvania	.....	35,541	.....
Albright College, Pennsylvania	300,000	41,487	0
Westminister College, Pennsylvania	435,390	69,914	80,000
Drexel Institute, Pennsylvania	2,000,000	95,138	.....
University of Pennsylvania	6,025,177	1,738,088	.....
Susquehanna University, Pennsylvania	72,000	31,600	50,000

TABLE 2.—*Productive endowment, income, and debt, 1914–15*—Continued.

[Tax-supported institutions are marked with † and Roman Catholic institutions with *.]

Institutions.	Endowment.	Income.	Debt.
Pennsylvania State College†	$598,913	$241,309	.....
Swarthmore College, Pennsylvania	1,627,447	927,009	0
Washington and Jefferson College, Pennsylvania	914,396	68,941	$118,323
Waynesburg College, Pennsylvania	86,060	20,685	2,000
College of Charleston,† South Carolina	306,300	22,102	0
University of South Carolina†	.....	142,227	.....
Furman University, South Carolina	.....	49,447	.....
Columbia College, South Carolina	.....	.....	.....
Converse College, South Carolina	156,358	74,567	0
Wofford College, South Carolina	194,179	39,578	42,486
University of South Dakota†	.....	194,772	0
King College, Tennessee	2[illegible],000	.....	.....
University of Chattanooga, Tennessee	407,519	49,917	72,000
Tusculum College, Tennessee	177,851	64,011	.....
Knoxville College (colored), Tennessee	10,500	41,580	10,336
Milligan College, Tennessee	.....	.....	7,000
Tennessee College	.....	52,536	23,077
George Peabody College for Teachers, Tennessee	2,000,000	169,243	0
Fisk University (colored), Tennessee	190,592	54,242	6
Vanderbilt University, Tennessee	2,150,000	268,292	1
University of the South, Tennessee	393,282	131,736	325,4 0
University of Texas†	2,000,000	602,609	0
Howard Payne College, Texas	.....	22,000	00
Rice Institute, Texas	10,000,000	529,000	100,000
Austin College, Texas	180,000	82,880	420,94
Baylor University, Texas	305,904	148,919	0
University of Utah†	.....	241,919	0
Middlebury College, Vermont	518,983	126,925	0
St. Michael's College,* Vermont	.....	22,450	.....
Bridgewater College, Virginia	20,168	25,414	0
University of Virginia†	2,211,472	444,315	200,000
Roanoke Institute, Virginia	.....	.....	.....
Emory and Henry College, Virginia	25,000	53,254	.....
Hampden-Sidney College, Virginia	180,654	25,712	0
Hollins College, Virginia	.....	107,489	.....
Washington and Lee University, Virginia	878,902	104,759	0
Randolph-Macon Woman's College, Virginia	262,000	202,900	42,000
Richmond College, Virginia	.....	.....	.....
Virginia Union University (colored)	100,000	38,113	3,000
College of William and Mary,† Virginia	151,327	53,550	18,000
University of Washington†	5,000,000	564,804	0
Spokane College, Washington	.....	.....	.....
Davis and Elkins College, West Virginia	100,000	16,600	18,508
Lawrence College, Wisconsin	896,211	110,566	6,500
Beloit College, Wisconsin	1,339,241	138,298	0
University of Wisconsin†	782,662	2,767,701	2,200
Milton College, Wisconsin	145,153	20,835	900
Concordia College, Wisconsin	8,500	28,455	.....
Milwaukee-Downer College, Wisconsin	216,207	131,164	.....
Mission-House, Wisconsin	20,000	.....	.....
Campion College,* Wisconsin	50,000	65,770	.....
Ripon College, Wisconsin	252,199	60,784	.....
St. Clara College and Academy,* Wisconsin	.....	35,134	45,000

TABLE 1.—*Colleges of arts and sciences, 1915–16.* PART II: *Students, expenditures, and receipts*—Continued.

Location.	Institution.	Students, requirements, degrees, and courses.																Expenditures for 1914–15.					
		Preparatory.		Regular.		Conditioned.		Special.		Total (including professional and special departments).		High school graduates entering in 1915.		Number of standard units required for admission.	Maximum number of entrance conditions allowed.	Number of semester hours required for bachelor's degree.	Junior college. (X=Yes; O=No.)	Salaries of college teachers.	Maintenance.	Increase of plant and lasting improvements.	Administration, including handling of institution's funds.	Receipts for 1914–15, exclusive of additions to endowments.	Debt.
		Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.										
1	2	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
PENNSYLVANIA—contd.																							
Beaver	Beaver College	0	21	0	37	0	0	0	13	0	120	.....	.....	15	.....	120	O	$9,354	.....	.....	$3,408	$24,667	.....
Chambersburg	Wilson College	0	0	0	162	0	0	0	10	0	195	0	52	14½	2	120	O	13,350	$1,501	$4,189	8,370	65,416	$13,000
Easton	Lafayette College	0	0	472	0	0	0	5	0	477	0	.....	.....	14½	2	130	O	80,037	42,895	6,051	5,070	130,484	126,232
Gettysburg	Pennsylvania College	74	6	280	14	12	1	33	1	399	22	112	2	15	2	128	O	26,350	15,399	3,000	5,760	65,000	0
Haverford	Haverford College	0	0	161	0	6	0	19	0	186	0	51	0	14½	3	130	O	56,350	17,500	14,000	9,950	160,588	96,578
Lancaster	Franklin and Marshall College.	0	0	291	0	12	0	16	0	291	0	67	0	14½	2	130	O	29,184	6,354	2,900	5,631	47,705	0
Lincoln University.	Lincoln University (colored).	0	0	143	0	0	0	20	0	212	0	57	0	15	0	120	O	10,766	5,130	.....	1,462	35,951	21,709
Meadville	Allegheny College	0	0	230	163	0	0	11	1	241	164	84	54	15	2	120	O	40,283	31,033	8,609	8,527	102,568	11,882
Mechanicsburg	Irving Female College	0	6	0	31	0	0	0	0	0	107	.....	.....	13	3	140	O	10,820	1,550	500	1,000	35,541	.....
Myerstown	Albright College	18	8	96	25	25	3	10	0	160	78	15	7	16	.....	134	O	12,500	6,030	3,352	2,200	41,487	0
New Wilmington.	Westminster College	4	2	97	84	2	0	9	0	112	86	34	26	15	1	120	O	29,477	17,458	29,352	.....	69,914	80,000
Philadelphia	Drexel Institute	41	0	148	391	3	3	2	0	191	391	26	177	14½	2½	.....	O	.....	.....	.....	.....	95,138	.....
Do	University of Pennsylvania.	0	0	635	380	0	0	3	0	4,339	870	.....	.....	15	2	128	O	256,250	119,884	476,118	599,735	1,738,088	0
Selinsgrove	Susquehanna University	54	18	110	15	8	7	10	6	192	111	37	5	14	5	120	O	18,000	7,400	6,000	4,000	31,600	50,000
State College	Pennsylvania State College.	.....	.....	144	29	0	0	8	11	152	40	51	10	14	0	136	O	408,059	70,877	228,576	50,502	941,309	.....
		.....	.....	179	2	0	0	1	0	180	2	179	2	14	0	160	O						
Swarthmore	Swarthmore College	0	0	125	230	0	0	1	5	214	237	46	70	14½	2	124	O	70,400	52,485	10,038	17,602	227,000	0

Washington	Washington and Jefferson College.	0	0	311	0	15	0	7	0	333	0	...	...	14½	2	124	O	28,835	14,299	...	9,900	68,941	118,323
Waynesburg	Waynesburg College	0	0	49	55	0	0	0	0	49	132	17	17	15	...	136	O	9,000	600	...	2,250	20,685	2,000
SOUTH CAROLINA.																							
Charleston	College of Charleston	0	0	69	0	7	0	4	0	80	0	29	0	14	2	122	O	12,100	3,882	2,000	1,500	22,102	0
College Place	Columbia College	0	4	0	123	0	0	0	100	0	392	0	70	14	2	...	O	...	...	...	...	...	...
Columbia	University of South Carolina.	0	0	281	14	9	0	42	18	507	32	124	11	11	1	138	O	57,234	17,051	13,000	30,200	142,227	0
Greenville	Furman University	0	0	192	0	0	0	13	0	205	0	...	...	12	0	130	O	...	...	...	...	49,447	...
Spartanburg	Converse College	0	0	0	153	0	0	0	50	0	406	...	...	14½	2	120	O	17,207	10,576	4,000	5,457	74,567	0
Do	Wofford College	0	0	288	0	32	0	4	0	324	0	86	0	14	2	132	O	23,213	5,256	...	3,375	39,578	42,486
SOUTH DAKOTA.																							
Vermilion	University of South Dakota.	0	0	126	152	0	0	24	71	315	289	36	63	15	2	128	O	73,086	89,970	...	7,920	194,772	0
TENNESSEE.																							
Bristol	King College	...	...	...	...	...	...	...	...	...	...	...	...	14	2	124	...	...	...	...	...	...	...
Chattanooga	University of Chattanooga.	0	0	94	60	0	0	14	17	108	77	...	...	14½	...	120	O	17,200	...	63,345	5,500	49,917	22,000
Greeneville	Tusculum College	75	44	31	31	11	0	3	17	134	148	...	...	15	2	128	O	7,775	5,958	28,618	4,624	64,011	0
Knoxville	Knoxville College (colored).	96	74	26	14	0	0	0	1	130	167	18	8	15	2	125	...	22,689	4,605	4,118	2,314	41,588	10,366
Milligan	Milligan College	45	14	98	42	0	0	0	0	149	52	12	10	15	...	128	...	6,000	1,200	500	12,500	...	7,000
Murfreesboro	Tennessee College	0	104	0	53	0	24	0	17	0	304	0	48	14	2	120	O	7,975	1,549	...	12,178	52,536	23,077
Nashville	Fisk University (colored)	93	84	83	90	12	13	11	10	213	324	12	12	15	1	140	O	16,517	9,016	1,025	8,069	54,242	0
Do	George Peabody College for Teachers.	0	0	413	1,099	...	...	...	...	413	1,099	...	...	...	...	186	O	78,930	15,664	1,352,646	13,328	169,243	0
Do	Vanderbilt University	0	0	250	62	36	18	10	10	80	72	131	27	14	2	128	O	58,000	9,300	9,000	109,000	268,292	0
Sewanee	University of the South	0	0	160	0	0	0	0	0	180	0	...	...	14	2	140	O	20,229	1,869	30,024	9,838	131,736	325,416
TEXAS.																							
Austin	University of Texas	0	0	674	677	126	82	82	52	1,682	1,201	275	237	14	2	120	O	239,107	47,748	13,271	31,373	602,609	0
Brownwood	Howard Payne College	90	54	62	36	0	0	3	13	165	139	21	19	14	2	120	O	10,500	6,000	...	...	22,000	50,000
Houston	Rice Institute	0	0	264	119	0	0	0	0	264	119	...	...	14	2	120	O	54,108	34,534	300,790	27,035	529,000	0
Sherman	Austin College	37	0	108	0	0	0	2	0	145	0	36	0	14	2	122	O	15,100	3,600	50,000	...	82,880	100,000
Waco	Baylor University	...	...	232	197	88	52	23	19	410	378	...	...	14	2	120	O	37,642	19,002	...	15,181	148,919	42,940
UTAH.																							
Salt Lake City	University of Utah	44	76	459	469	305	369	0	0	808	914	...	...	15	2	122	O	175,135	49,457	1,258	9,300	241,919	0
VERMONT.																							
Middlebury	Middlebury College	0	0	187	156	0	0	0	0	187	156	67	50	14	2	120	O	43,447	8,610	34,838	10,965	126,925	0
Winooski	St. Michael's College	80	0	20	0	0	0	0	0	115	0	4	0	15	3	140	O	...	...	...	...	...	...

TABLE 1.—*Colleges of arts and sciences, 1915–16.* PART II: *Students, expenditures, and receipts*—Continued.

Location.	Institution.	Students, requirements, degrees, and courses.																Expenditures for 1914–15.				Receipts for 1914–15, exclusive of additions to endowments.	Debt.
		Preparatory.		Regular.		Conditioned.		Special.		Total (including professional and special departments).		High school graduates entering in 1915.		Number of standard units required for admission.	Maximum number of entrance conditions allowed.	Number of semester hours required for bachelor's degree.	Junior college. (X=Yes; O=No.)	Salaries of college teachers.	Maintenance.	Increase of plant and lasting improvements.	Administration, including handling of institution's funds.		
		Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.										
1	2	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
VIRGINIA.																							
Bridgewater	Bridgewater College	40	22	41	28	0	0	0	0	84	75	8	11	14	2	120	O	$7,200	$1,691	$1,567	.....	$22,450	0
Charlottesville	University of Virginia	0	0	468	0	0	0	55	0	523	0	148	0	14	2	120	O	98,406	53,302	70,000	$33,241	444,315	$200,000
Danville	Roanoke Institute	0	100	0	26	0	5	0	0	0	188	0	8	15	2½	.....	X	.....	.....	.....	.....	.....	.....
Emory	Emory and Henry College.	62	0	176	0	0	0	0	0	238	0	.....	.....	14	2	128	O	.....	.....	.....	.....	53,254	.....
Hampden-Sidney.	Hampden-Sidney College.	0	0	102	0	15	0	1	0	118	0	38	0	14	2	120	O	12,375	4,683	945	2,789	25,712	0
Hollins	Hollins College	0	84	0	106	0	0	0	28	0	218	0	45	14	2	120	O	11,450	8,753	28,946	926	107,489	.....
Lexington	Washington and Lee University.	0	0	331	0	24	0	14	0	511	0	116	0	14	2	126	O	39,801	16,271	44,683	16,202	104,759	0
Lynchburg	Randolph-Macon Woman's College.	0	0	0	503	0	84	0	121	0	632	0	241	15	2	120	O	53,735	12,965	2,636	9,737	202,900	42,000
Richmond	Richmond College	0	0	211	76	37	38	20	3	268	131	77	45	15	3	120	O	53,199	.....	.....	9,357	.....	.....
Do	Virginia Union University (colored).	228	0	59	6	5	0	3	1	62	7	22	5	15	2	160	O	6,000	8,538	500	500	38,113	3,000
Williamsburg	College of William and Mary.	64	0	178	0	0	0	0	0	242	0	50	0	14	2	120	O	24,400	3,938	27,308	3,560	53,550	18,000
WASHINGTON.																							
Seattle	University of Washington.	0	0	719	959	51	44	43	30	1,726	1,272	477	349	15	2	120	O	199,522	95,356	1,926	50,987	549,073	0
Spokane	Spokane	41	40	2	8	0	0	0	0	43	48	2	6	16	1	.....	X	5,000	971	500	8,400	.....	.....

WEST VIRGINIA.																							
Elkins	Davis and Elkins College	22	7	29	18	3	1	2	3	95	41	10	10	14	2	128	O	6,642	4,435	.....	4,089	16,600	18,508
WISCONSIN.																							
Appleton	Lawrence College	0	0	294	270	0	0	3	13	338	476	131	121	15	2	128	O	38,776	18,711	3,888	6,082	110,566	6,500
Beloit	Beloit	0	0	246	142	0	0	0	0	246	142	115	43	15	0	120	O	59,006	27,619	.....	15,118	138,298	0
Madison	University of Wisconsin	.....	.....	1,634	1,066	.....	.....	58	43	3,146	1,514	507	320	14	0	120	O	483,174	163,030	120,021	121,518	2,767,701	0
Milton	Milton College	8	13	28	33	2	1	3	5	56	80	14	15	15	2	128	O	9,233	2,845	5,790	244	20,835	2,200
Milwaukee	Concordia College	142	0	54	0	0	0	0	0	196	0	0	0	.....	.....	.....	X	10,680	3,275	4,500	.....	28,455	900
Do	Marquette University	.....	0	.....	0	0	0	0	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do	Milwaukee-Downer College.	0	0	0	190	0	10	0	34	0	347	0	96	15	1	120	O	21,870	16,507	17,132	10,654	131,164	.....
Plymouth	Mission House	36	2	35	1	0	0	3	0	97	3	4	0	15	.....	150	O	.....	.....	.....	.....	.....	.....
Prairie du Chien	Campion College	285	0	80	0	0	0	0	0	365	0	180	0	16	2	142	O	.....	.....	.....	.....	65,770	.....
Ripon	Ripon College	0	0	164	93	1	1	0	0	182	159	.....	.....	15	2	124	O	18,720	10,511	.....	47,611	60,784	.....
Sinsinawa	St. Clara College and Academy.	0	75	0	47	0	0	0	22	0	160	0	36	15	.....	120	O	.....	5,100	20,000	.....	43,179	45,000

FINANCIAL FOUNDATION.

Suggested Requirements I and II.—I. A college of arts and sciences should have an annual income of at least $40,000. At least three fifths of an income as small as $40,000 should be expended for salaries for teaching and administration. Exception is made of certain denominational institutions whose teaching staffs work without salaries.

II. A study of conditions at numerous substantial institutions indicates that college work of standard grade costs somewhere in the neighborhood of $200 a year per student. The minimum productive endowment for a college of arts and sciences should be $250,000. It is noted, however, that with advancing prices this amount should be rapidly increased; probably twice as much will be needed in the near future to give an institution the assurance of stability. Institutions should strive to bring their endowment to the point where it will yield at least half the money needed for annual expenses.

TABLE 2.—*Productive endowment, income, and debt, 1914–15.*

[Tax-supported institutions are marked with † and Roman Catholic institutions with *.]

Institutions.	Endowment.	Income.	Debt.
University of Alabama†	$627,467	$210,421	0
University of Arizona†	10,500	423,021	0
Central college, Arkansas		29,193	$24,000
Hendrix College, Arkansas	295,000	39,966	58,886
Pomona College, California	673,198	347,133	0
Occidental College, California	312,000	50,727	8,000
Mills College, California	486,310	80,774	0
University of Redlands, California	97,000	50,505	125,529
University of Santa Clara,* California		274,200	
Leland Stanford Junior University, California	23,975,338	1,235,891	0
University of Colorado†	83,000	300,436	0
Colorado College	1,042,592	148,887	0
University of Denver, Colorado	420,000	140,000	
Trinity College, Connecticut	1,226,801	83,835	5,000
Yale University, Connecticut	16,152,836	1,777,134	0
Gallaudet College, District of Columbia			
George Washington University, District of Columbia	136,340	220,954	0
Howard University (colored), District of Columbia	309,018	203,964	0
University of Florida†	219,650	170,297	0
Columbia College, Florida			25,000
Florida State College for Women†		97,885	0
University of Georgia†	372,270	286,302	0
Atlanta University (colored), Georgia	107,563	62,927	42,709
Cox College, Georgia		31,000	
North Georgia Agricultural College		38,700	
Agnes Scott College, Georgia	175,568	94,711	35,150
Piedmont College, Georgia	105,000	34,719	11,000
Bessie Tift College, Georgia	6,000	56,000	87,000
Brenau College, Georgia		151,860	27,000
Emory University, Georgia			65,500
Shorter College, Georgia	50,000	70,560	
University of Idaho†	666,346	264,867	0
Aurora College, Illinois			
Illinois Wesleyan University	373,729	49,851	0
Blackburn College, Illinois	248,813	14,618	13,000
De Paul University,* Illinois		53,434	
Loyola University,* Illinois			
James Millikin University, Illinois	208,777	96,588	0
Knox College, Illinois	504,463	71,155	89,000
Illinois Woman's College	123,155	104,984	0
Lake Forest College, Illinois	832,938	216,153	0
Frances Shimer School, Illinois	78,926	43,823	30,000
Northwestern College, Illinois	250,529	40,082	55,000
Rockford College, Illinois	208,976	92,189	13,000

TABLE 2.—*Productive endowment, income, and debt, 1914–15*—Continued.

[Tax-supported institutions are marked with † and Roman Catholic institutions with *.]

Institutions.	Endowment.	Income.	Debt.
Augustana College, Illinois	$441,764	$99,914	$69,075
Indiana University†	744,000	15,000	0
Wabash College, Indiana	739,800	57,702	0
Earlham College, Indiana	493,538	117,551	.....
Franklin College, Indiana	300,519	48,253	0
De Pauw University, Indiana	1,425,959	127,726	0
Butler College, Indiana	.....	45,314	.....
University of Notre Dame,* Indiana	.....	.....	0
Taylor University, Indiana	1,290	47,135	34,500
Iowa State Teachers College†	.....	331,865	0
Coe College, Iowa	750,000	63,452	260,000
Wartburg College, Iowa	19,000	19,797	.....
Des Moines College, Iowa	111,000	51,229	80,000
Drake University, Iowa	804,766	189,718	283,000
Parsons College, Iowa	235,176	38,217	61,875
State University of Iowa†	494,338	986,513	0
Cornell College, Iowa	861,223	132,079	0
Central University of Iowa	89,826	18,850	6,744
Morningside College, Iowa	400,000	46,344	.....
Buena Vista College, Iowa	25,000	20,072	50,000
Midland College, Kansas	85,000	25,000	1,200
College of Emporia, Kansas	112,000	36,549	61,635
Ottawa University, Kansas	236,786	38,978	38,900
Kansas Wesleyan University	115,000	20,045	19,000
Cooper College, Kansas	139,271	21,453	8,000
Washburn College, Kansas	363,377	78,753	60,000
Southwestern College, Kansas	130,000	43,615	.....
Ogden College, Kentucky	200,000	11,018	0
Centre College, Kentucky	.....	.....	.....
Georgetown College, Kentucky	275,000	41,215	22,000
University of Kentucky†	205,000	321,062	30,552
Transylvania College, Kentucky	319,612	41,270	.....
University of Louisville,† Kentucky	.....	79,250	0
Bethel College, Kentucky	63,800	12,490	8,569
H. Sophie Newcomb Memorial College, Louisiana	2,765,000	166,936	0
Loyola University,* Louisiana	.....	.....	.....
Bowdoin College, Maine	2,312,868	151,563	0
Bates College, Maine	749,993	89,809	3,500
University of Maine†	252,050	364,042	108,842
St. John's College, Maryland	.....	53,000	0
Goucher College, Maryland	473,831	212,569	0
Johns Hopkins University, Maryland	7,287,077	628,830	.....
Morgan College (colored), Maryland	56,000	34,213	25,000
Washington College, Maryland	.....	62,795	5,000
Rock Hill College,* Maryland	.....	26,000	0
Hood College, Maryland	42,500	71,840	111,700
Maryland College for Women	.....	.....	40,000
Amherst College, Massachusetts	2,736,058	221,817	0
Boston University, Massachusetts	1,308,869	222,474	0
Harvard University, Massachusetts	28,471,046	3,019,602	0
Smith College, Massachusetts	2,182,296	736,734	0
Wheaton College, Massachusetts	896,310	119,676	0
Mount Holyoke College, Massachusetts	1,426,173	336,998	0
Tufts College, Massachusetts	3,020,204	301,955	0
Clark College, Massachusetts	1,300,000	85,250	0
Alma College, Michigan	401,070	54,673	10,366
University of Michigan†	963,193	2,321,241	0
St. John's University,* Minnesota	.....	71,145	.....
Augsburg Seminary, Minnesota	32,570	21,007	15,000
Carleton College, Minnesota	871,937	204,584	51,161
Hamline University, Minnesota	842,000	63,264	0
Macalester College, Minnesota	468,739	55,796	0
College of St. Catherine,* Minnesota	.....	.....	120,000
Gustavus Adolphus College, Minnesota	265,000	42,295	35,000
College of St. Teresa,* Minnesota	.....	72,500	200,000
Mississippi College	125,000	60,293	.....
Meridian College, Mississippi	.....	.....	.....
University of Mississippi†	700,000	269,500	23,000
Stephens College, Missouri	40,000	49,000	20,000
Westminster College, Missouri	.....	.....	31,000
William Jewell College, Missouri	853,085	84,047	44,000
Park College, Missouri	453,876	91,708	0
Lindenwood College, Missouri	22,000	128,307	0
Forest Park College, Missouri	.....	.....	.....
St. Louis University, Missouri	.....	.....	.....
Washington University, Missouri	6,455,804	716,471	.....
Drury College, Missouri	250,000	54,084	0
Central Wesleyan College, Missouri	209,000	24,607	39,000
University of Montana†	.....	215,945	0

TABLE 2.—*Productive endowment, income, and debt, 1914–15*—Continued.

[Tax-supported institutions are marked with † and Roman Catholic institutions with *.]

Institutions.	Endowment.	Income.	Debt.
Bellevue College, Nebraska	$15,085	$36,155	$24,000
Union College, Nebraska		66,159	0
Doane College, Nebraska	282,757	45,448	40,785
University of Nebraska†	787,255	1,368,039	0
New Hampshire College of Agriculture and Mechanic Arts†	950,000	273,236	0
College of St. Elizabeth,* New Jersey		48,675	
Upsala College, New Jersey		13,158	21,620
University of New Mexico†		62,577	0
New York State College for Teachers†		110,103	0
Alfred University, New York	411,963	36,307	0
St. Stephen's College, New York	102,733	40,546	40,000
Wells College, New York	404,400	146,774	40,000
St. Lawrence University, New York	747,940	236,341	2,000
Elmira College, New York	119,780	104,543	0
Hobart College, New York	750,073	125,890	0
College of New Rochelle,* New York		70,289	52,122
Barnard College, New York	1,586,137	262,423	0
Columbia University, New York	30,900,471	4,204,937	0
College of the City of New York†		526,108	0
Hunter College of the City of New York†		550,124	0
New York University	1,393,805	630,415	645,000
Vassar College, New York	1,660,105	774,613	
University of Rochester, New York	1,650,629	139,996	0
Union University, New York	982,173	140,117	0
University of North Carolina†	148,594	261,658	109,315
Davidson College, North Carolina	285,000	51,830	0
Trinity College, North Carolina	1,395,292	118,829	0
Elon College, North Carolina	86,460	52,686	52,515
Guilford College, North Carolina	175,000	43,600	60,000
Shaw University (colored), North Carolina	51,122	37,257	
Weaver College, North Carolina			13,200
Salem Academy and College, North Carolina	170,266	113,367	
University of North Dakota†	1,705,761	268,947	38,500
Municipal University of Akron,† Ohio	82,753	65,833	5,346
Ohio University†	150,000	419,250	0
Baldwin-Wallace College, Ohio	535,102	46,447	52,650
Bluffton College, Ohio	45,000	10,456	70,000
Cedarville College, Ohio	85,907	7,708	0
University of Concinnati,† Ohio	869,671	867,985	
Western Reserve University, Ohio	3,526,608	438,278	0
Capital University, Ohio	145,309	24,883	
St. Mary College,* Ohio			
Defiance College, Ohio	273,266	41,688	20,000
Ohio Wesleyan University	990,100	145,300	
Kenyon College, Ohio	509,002	66,841	18,000
Marietta College, Ohio	556,428	42,929	0
Muskingum College, Ohio	123,124	50,016	97,000
Miami University,† Ohio	109,775	328,734	0
Oxford College for Women, Ohio	1,000	53,127	15,155
Western College for Women, Ohio	193,616	112,384	0
Lake Erie College, Ohio	244,852	76,189	15,000
Rio Grande College, Ohio	78,000	8,200	3,000
Otterbein University, Ohio	250,000	59,196	36,770
College of Wooster, Ohio	1,229,578	210,004	3,434
Methodist University of Oklahoma	65,000	14,315	4,000
Kingfisher College, Oklahoma	133,813	17,268	0
University of Oklahoma†	3,670,000	231,147	0
Albany College, Oregon	204,219	22,225	54,000
Pacific University, Oregon	224,554	31,802	45,000
McMinnville College, Oregon	60,450	27,247	30,685
Reed College, Oregon	3,000,000	122,850	0
Pacific College, Oregon	110,000	7,500	21,570
Willamette University, Oregon	516,555	39,080	28,000
Moravian College, Pennsylvania	108,352	33,402	0
Bryn Mawr College, Pennsylvania	2,002,300	280,562	51,265
Beaver College, Pennsylvania	12,000	24,667	0
Wilson College, Pennsylvania	71,475	65,416	13,000
Lafayette College, Pennsylvania	620,128	130,484	126,232
Pennsylvania College	390,000	65,000	0
Haverford College, Pennsylvania	2,000,268	160,588	96,578
Franklin and Marshall College, Pennsylvania	485,645	47,705	0
Lincoln University (colored), Pennsylvania	280,453	35,961	21,709
Allegheny College, Pennsylvania	425,000	102,568	11,882
Irving Female College, Pennsylvania		35,541	
Albright College, Pennsylvania	300,000	41,487	0
Westminister College, Pennsylvania	435,390	69,914	80,000
Drexel Institute, Pennsylvania	2,000,000	95,138	
University of Pennsylvania	6,025,177	1,738,088	
Susquehanna University, Pennsylvania	72,000	31,600	50,000

TABLE 2.—*Productive endowment, income, and debt, 1914–15*—Continued.

[Tax-supported institutions are marked with † and Roman Catholic institutions with *.]

Institutions.	Endowment.	Income.	Debt.
Pennsylvania State College†	$598,913	$241,309	.....
Swarthmore College, Pennsylvania	1,627,447	927,009	0
Washington and Jefferson College, Pennsylvania	914,396	68,941	$118,323
Waynesburg College, Pennsylvania	86,060	20,685	2,000
College of Charleston,† South Carolina	306,300	22,102	0
University of South Carolina†	.....	142,227	.....
Furman University, South Carolina	.....	49,447	.....
Columbia College, South Carolina	.....	.....	.....
Converse College, South Carolina	156,358	74,567	0
Wofford College, South Carolina	194,179	39,578	42,486
University of South Dakota†	.....	194,772	0
King College, Tennessee	25,000	.....	.....
University of Chattanooga, Tennessee	407,519	49,917	72,000
Tusculum College, Tennessee	177,851	64,011	.....
Knoxville College (colored), Tennessee	10,500	41,580	10,336
Milligan College, Tennessee	.....	.....	7,000
Tennessee College	.....	52,536	23,077
George Peabody College for Teachers, Tennessee	2,000,000	169,243	0
Fisk University (colored), Tennessee	190,592	54,242	6
Vanderbilt University, Tennessee	2,150,000	268,292	1
University of the South, Tennessee	393,282	131,736	325,4 0
University of Texas†	2,000,000	602,609	0
Howard Payne College, Texas	.....	22,000	00
Rice Institute, Texas	10,000,000	529,000	100,000
Austin College, Texas	180,000	82,880	420,94
Baylor University, Texas	305,904	148,919	0
University of Utah†	.....	241,919	0
Middlebury College, Vermont	518,983	126,925	0
St. Michael's College,* Vermont	.....	22,450	.....
Bridgewater College, Virginia	20,168	25,414	0
University of Virginia†	2,211,472	444,315	200,000
Roanoke Institute, Virginia	.....	.....	.....
Emory and Henry College, Virginia	25,000	53,254	.....
Hampden-Sidney College, Virginia	180,654	25,712	0
Hollins College, Virginia	.....	107,489	.....
Washington and Lee University, Virginia	878,902	104,759	0
Randolph-Macon Woman's College, Virginia	262,000	202,900	42,000
Richmond College, Virginia	.....	.....	.....
Virginia Union University (colored)	100,000	38,113	3,000
College of William and Mary,† Virginia	151,327	53,550	18,000
University of Washington†	5,000,000	564,804	0
Spokane College, Washington	.....	.....	.....
Davis and Elkins College, West Virginia	100,000	16,600	18,508
Lawrence College, Wisconsin	896,211	110,566	6,500
Beloit College, Wisconsin	1,339,241	138,298	0
University of Wisconsin†	782,662	2,767,701	2,200
Milton College, Wisconsin	145,153	20,835	900
Concordia College, Wisconsin	8,500	28,455	.....
Milwaukee-Downer College, Wisconsin	216,207	131,164	.....
Mission-House, Wisconsin	20,000	.....	.....
Campion College,* Wisconsin	50,000	65,770	.....
Ripon College, Wisconsin	252,199	60,784	.....
St. Clara College and Academy,* Wisconsin	.....	35,134	45,000

TABLE 3.—*Income and amount spent for salaries of college teachers.*

Institutions.	Income, 1914–15.	Spent for salaries of college teachers, 1914–15.
University of Alabama	$210,421	$58,736
University of Arizona	423,021	61,300
Central College, Arkansas	29,193	3,800
Hendrix College, Arkansas	39,966	11,625
Pomona College, California	347,133	50,813
Occidental College, California	50,727	26,853
Mills College, California	80,774	35,067
University of Redlands, California	50,505	23,200
University of Santa Clara, California	274,200	.....
Leland Stanford Junior University, California	1,235,891	500,841
University of Colorado	300,436	96,300
Colorado College	148,887	58,166
University of Denver, Colorado	140,000	.....
Trinity College, Connecticut	83,835	42,480
Yale University, Connecticut	1,777,134	280,000
Gallaudet College, District of Columbia	.....	.....
George Washington University, District of Columbia	220,954	45,621
Howard University (colored), District of Columbia	203,964	35,675
University of Florida	170,297	28,070
Columbia College, Florida	.....	4,283
Florida State College for Women	97,885	50,315
University of Georgia	286,302	52,020
Atlanta University (colored), Georgia	62,927	20,135
Cox College, Georgia	31,000	6,284
North Georgia Agricultural College	38,700	18,000
Agnes Scott College, Georgia	94,711	25,024
Piedmont College, Georgia	34,719	8,575
Bessie Tift College, Georgia	56,000	20,000
Brenau College, Georgia	151,860	13,400
Emory University, Georgia	.....	26,558
Shorter College, Georgia	70,560	.....
University of Idaho	264,867	58,297
Aurora College, Illinois	.....	.....
Illinois Wesleyan University	49,851	15,400
Blackburn College, Illinois	14,618	8,000
De Paul University, Illinois	53,434	6,000
Loyola University, Illinois	.....	.....
James Millikin University, Illinois	96,588	41,157
Knox College, Illinois	71,155	30,654
Illinois Woman's College	104,984	21,032
Lake Forest College, Illinois	216,153	36,400
Frances Shimer School, Illinois	43,823	12,500
Northwestern College, Illinois	40,082	16,000
Rockford College, Illinois	92,189	19,268
Augustana College, Illinois	99,914	21,800
Indiana University	615,000	241,311
Wabash College, Indiana	57,702	35,641
Earlham College, Indiana	117,551	36,652
Franklin College, Indiana	48,253	14,206
De Pauw University, Indiana	127,726	54,262
Butler College, Indiana	45,314	30,065
University of Notre Dame, Indiana	.....	31,730
Taylor University, Indiana	47,135	5,800
Iowa State Teachers' College	331,865	147,286
Coe College, Iowa	63,452	29,734
Wartburg College, Iowa	19,797	.....
Des Moines College, Iowa	51,229	12,000
Drake University, Iowa	189,718	40,020
Parsons College, Iowa	38,217	12,500
State University of Iowa	986,513	193,528
Cornell College, Iowa	132,079	32,050
Central University of Iowa	18,850	10,365
Morningside College, Iowa	46,344	20,600
Buena Vista College, Iowa	20,072	8,350
Midland College, Kansas	25,000	12,200
College of Emporia, Kansas	36,549	22,820
Ottawa University, Kansas	38,978	12,912
Kansas Wesleyan University	20,045	14,200
Cooper College, Kansas	21,453	11,646
Washburn College, Kansas	78,753	19,834
Southwestern College, Kansas	43,615	10,575
Ogden College, Kentucky	11,018	6,000
Centre College, Kentucky	.....	19,000
Georgetown College, Kentucky	41,215	12,450
University of Kentucky	321,062	9,175
Transylvania College, Kentucky	41,270	12,200
University of Louisville, Kentucky	79,250	33,018
Bethel College, Kentucky	12,490	4,177

TABLE 3.—*Income and amount spent for salaries of college teachers*—Continued.

Institutions.	Income, 1914–15.	Spent for salaries of college teachers, 1914–15.
H. Sophie Newcomb Memorial College, Louisiana	$166,936	$53,270
Loyola University, Louisiana	.....	.....
Bowdoin College, Maine	151,563	65,101
Bates College, Maine	89,809	44,896
University of Maine	364,042	134,097
St. John's College, Maryland	53,000	17,600
Goucher College, Maryland	212,569	44,741
Johns Hopkins University, Maryland	628,830	353,934
Morgan College (colored), Maryland	34,213	6,675
Washington College, Maryland	62,795	13,000
Rock Hill College, Maryland	26,000	.....
Hood College, Maryland	71,840	18,075
Maryland College for Women	.....	8,100
Amherst College, Massachusetts	221,817	.....
Boston University, Massachusetts	222,474	48,333
Harvard University, Massachusetts	3,019,602	550,723
Smith College, Massachusetts	736,734	229,159
Wheaton College, Massachusetts	119,676	24,475
Mount Holyoke College, Massachusetts	336,998	105,877
Tufts College, Massachusetts	301,955	.....
Clark College, Massachusetts	85,250	43,700
Alma College, Michigan	54,673	17,861
University of Michigan	2,321,241	326,906
St. John's University, Minnesota	71,145	.....
Augsburg Seminary, Minnesota	21,007	15,209
Carleton College, Minnesota	204,584	53,698
Hamline University, Minnesota	63,264	30,350
Macalester College, Minnesota	55,796	24,954
College of St. Catherine, Minnesota	.....	38,000
Gustavus Adolphus College, Minnesota	42,295	13,938
College of St. Teresa, Minnesota	72,500	15,000
Mississippi College	60,293	.....
Meridian College, Mississippi	.....	.....
University of Mississippi	269,500	40,000
Stephens College, Missouri	49,000	9,786
Westminster College, Missouri	.....	12,610
William Jewell College, Missouri	84,047	21,491
Park College, Missouri	91,708	23,350
Lindenwood College, Missouri	128,307	7,500
Forest Park College, Missouri	.....	.....
St. Louis University, Missouri	.....	.....
Washington University, Missouri	716,471	260,448
Drury College, Missouri	54,084	26,225
Central Wesleyan College, Missouri	24,607	8,750
University of Montana	215,945	64,995
Bellevue College, Nebraska	36,155	11,500
Union College, Nebraska	66,159	8,381
Doane College, Nebraska	45,448	17,670
University of Nebraska	1,368,039	250,578
New Hampshire College of Agriculture and Mechanic Arts	273,236	64,500
College of St. Elizabeth, New Jersey	48,675	10,000
Upsala College, New Jersey	13,158	8,860
University of New Mexico	62,577	34,450
New York State College for Teachers	110,103	9,432
Alfred University, New York	36,307	21,787
St. Stephen's College, New York	40,546	17,000
Wells College, New York	146,774	40,288
St. Lawrence University, New York	236,341	23,790
Elmira College, New York	104,543	32,733
Hobart College, New York	125,890	33,500
College of New Rochelle, New York	70,289	7,536
Barnard College, New York	262,423	130,330
Columbia University, New York	4,204,937	1,252,658
College of the City of New York	526,108	319,325
Hunter College of the City of New York	550,124	287,546
New York University	630,415	52,261
Vassar College, New York	774,613	181,498
University of Rochester, New York	139,996	78,232
Union University, New York	140,117	65,379
University of North Carolina	261,658	75,629
Davidson College, North Carolina	51,830	27,185
Trinity College, North Carolina	118,829	63,142
Elon College, North Carolina	52,686	15,800
Guilford College, North Carolina	43,600	12,150
Shaw University (colored), North Carolina	37,257	.....
Weaver College, North Carolina	.....	4,800
Salem Academy and College, North Carolina	113,367	19,370
University of North Dakota	268,947	115,200

TABLE 3.—*Income and amount spent for salaries of college teachers*—Continued.

Institutions.	Income, 1914–15.	Spent for salaries of college teachers, 1914–15.
Municipal University of Akron, Ohio	$65,833	$28,128
Ohio University	419,250	36,150
Baldwin-Wallace College, Ohio	46,447	24,341
Bluffton College, Ohio	23,264	20,720
Cedarville College, Ohio	7,708	6,168
University of Cincinnati, Ohio	867,985	124,605
Western Reserve University, Ohio	438,278	138,922
Capital University, Ohio	24,883	17,450
St. Mary College, Ohio	.....	.....
Defiance College, Ohio	41,6[illegible]	15,259
Ohio Wesleyan University	145,300	66,777
Kenyon College, Ohio	66,841	21,688
Marietta College, Ohio	42,929	22,795
Muskingum College, Ohio	50,016	10,061
Miami University, Ohio	328,734	53,060
Oxford College for Women, Ohio	53,127	12,000
Western College for Women, Ohio	112,384	26,752
Lake Erie College, Ohio	76,189	25,220
Rio Grande College, Ohio	8,200	4,000
Otterbein University, Ohio	59,196	19,470
College of Wooster, Ohio	210,004	50,971
Methodist University of Oklahoma	14,315	10,000
Kingfisher College, Oklahoma	17,268	9,600
University of Oklahoma	231,147	72,452
Albany College, Oregon	22,225	11,450
Pacific University, Oregon	31,802	11,270
McMinnville College, Oregon	27,247	13,975
Pacific College, Oregon	7,500	8,750
Reed College, Oregon	122,850	44,[illegible]
Willamette University, Oregon	39,080	12,000
Moravian College, Pennsylvania	33,402	9,300
Bryn Mawr College, Pennsylvania	280,502	110,135
Beaver College, Pennsylvania	24,667	9,354
Wilson College, Pennsylvania	65,416	13,350
Lafayette College, Pennsylvania	130,484	72,437
Pennsylvania College	65,000	26,350
Haverford College, Pennsylvania	160,588	56,350
Franklin and Marshall College, Pennsylvania	47,705	29,184
Lincoln University (colored), Pennsylvania	35,951	10,766
Allegheny College, Pennsylvania	102,568	40,2[illegible]3
Irving Female College, Pennsylvania	35,541	10,820
Albright College, Pennsylvania	41,487	12,500
Westminster College, Pennsylvania	69,914	29,479
Drexel Institute, Pennsylvania	95,138	.....
University of Pennsylvania	1,738,088	256,250
Susquehanna University, Pennsylvania	31,600	18,000
Pennsylvania State College	941,309	408,050
Swarthmore College, Pennsylvania	227,009	70,400
Washington and Jefferson College, Pennsylvania	68,941	28,835
Waynesburg College, Pennsylvania	20,685	9,000
College of Charleston, South Carolina	22,102	12,100
University of South Carolina	142,227	57,235
Furman University, South Carolina	49,447	.....
Columbia College, South Carolina	.....	.....
Converse College, South Carolina	74,567	17,208
Wofford College, South Carolina	39,578	23,2[illegible]
University of South Dakota	194,772	73,9[illegible]
King College, Tennessee	.....	.....
University of Chattanooga, Tennessee	49,917	17,[illegible]
Tusculum College, Tennessee	64,011	7,[illegible]
Knoxville College (colored), Tennessee	41,580	22,6[illegible]
Milligan College, Tennessee	.....	6,000
Tennessee College	52,536	7,975
George Peabody College for Teachers, Tennessee	169,243	61,000
Fisk University (colored), Tennessee	54,242	16,517
Vanderbilt University, Tennessee	268,292	58,000
University of the South, Tennessee	131,736	20,229
University of Texas	602,609	239,107
Howard Payne College, Texas	22,000	10,500
Rice Institute, Texas	529,000	54,108
Austin College, Texas	82,880	15,100
Baylor University, Texas	148,919	37,642
University of Utah	241,919	175,135
Middlebury College, Vermont	126,925	43,447
St. Michael's College, Vermont	22,450	.....
Bridgewater College, Virginia	25,414	7,200
University of Virginia	444,315	98,406
Roanoke Institute, Virginia	.....	.....

TABLE 3.—*Income and amount spent for salaries of college teachers*—Continued.

Institutions.	Income, 1914–15.	Spent for salaries of college teachers, 1914–15.
Emory and Henry College, Virginia	$53,254	
Hampden-Sidney College, Virginia	25,712	$12,375
Hollins College, Virginia	107,489	11,450
Washington and Lee University, Virginia	104,759	39,801
Randolph-Macon Woman's College, Virginia	202,900	53,735
Richmond College, Virginia		53,200
Virginia Union University (colored)	38,113	6,000
College of William and Mary, Virginia	53,550	24,400
University of Washington	564,804	199,522
Spokane College, Washington		5,000
Davis and Elkins College, West Virginia	16,600	6,642
Lawrence College, Wisconsin	110,566	38,776
Beloit College, Wisconsin	138,298	59,006
University of Wisconsin	2,767,701	483,174
Milton College, Wisconsin	20,835	9,233
Concordia College, Wisconsin	28,455	10,680
Milwaukee-Downer College, Wisconsin	131,164	21,870
Mission-House, Wisconsin		
Campion College, Wisconsin	65,770	
Ripon College, Wisconsin	60,784	18,720
St. Clara College and Academy, Wisconsin	35,134	1,260

NUMBER OF DEPARTMENTS.

Suggested Requirement III.—A college of arts and sciences should have as many as 11 departments, in each of which at least one teacher should devote his whole time to collegiate instruction. Some of the larger departments will require more than one instructor. The following departments are suggested: English; modern languages (or French or German or Spanish) other than English; ancient languages; history; philosophy and psychology; economic, political, and social sciences; mathematics; physics; chemistry; biology (or zoology and botany); geology and geography. In addition, it seems desirable, wherever possible, to separate the departments of Romance and Germanic languages; and some of the other groups might well be divided, especially in the larger colleges.

TABLE 4.—*Institutions having eleven specified departments or fewer, 1915–16.*

Institutions.	Number of departments.	Institutions.	Number of departments.
University of Alabama	11	University of Denver, Colorado	11
University of Arizona	11	Trinity College, Connecticut	11
Central College, Arkansas	4	Yale University, Connecticut	11
Hendrix College, Arkansas	2	Gallaudet College, District of Columbia	4
Pomona College, California	11	George Washington University, District of Columbia	11
Occidental College, California	11	Howard University (colored), District of Columbia	11
Mills College, California	7	University of Florida	11
University of Redlands, California	11	Columbia College, Florida	8
University of Santa Clara, California	11	Florida State College for Women	11
Leland Standord Junior University, California	11	University of Georgia	11
University of Colorado	11	Atlanta University (colored), Georgia	
Colorado College	11		

TABLE 4.—*Institutions having eleven specified departments or fewer, 1915–16.*

Institutions.	Number of departments.	Institutions.	Number of departments.
Cox College, Georgia	7	Alma College, Michigan	9
North Georgia Agricultural College	3	University of Michigan	11
Agnes Scott College, Georgia	11	St. John's University, Minnesota	4
Piedmont College, Georgia	5	Augsburg Seminary, Minnesota	2
Bessie Tift College, Georgia	8	Carelton College, Minnesota	11
Brenau College, Georgia	11	Hamline University, Minnesota	11
Emory University, Georgia	11	Macalester College, Minnesota	11
Shorter College, Georgia	4	College of St. Catherine, Minnesota	11
University of Idaho	11	Gustavus Adolphus College, Minnesota	11
Aurora College, Illinois	8	College of St. Teresa, Minnesota	11
Illinois Wesleyan University	8	Mississippi College	6
Blackburn College, Illinois	7	Meridian College, Mississippi	.....
De Paul University, Illinois	11	University of Mississippi	11
Loyola University, Illinois	11	Stephens College, Missouri	7
James Millikin University, Illinois	11	Westminster College, Missouri	2
Knox College, Illinois	11	William Jewell College, Missouri	10
Illinois Woman's College	11	Park College, Missouri	11
Lake Forest College, Illinois	11	Lindenwood College, Missouri	.....
Frances Shimer School, Illinois	.....	Forest Park College, Missouri	7
Northwestern College, Illinois	11	St. Louis University, Missouri	9
Rockford College, Illinois	11	Washington University, Missouri	11
Augustana College, Illinois	7	Drury College, Missouri	11
Indiana University	11	Central Wesleyan College, Missouri	8
Wabash College, Indiana	11	University of Montana	11
Earlham College, Indiana	11	Bellevue College, Nebraska	7
Franklin College, Indiana	11	Union College, Nebraska	4
De Pauw University, Indiana	11	Doane College, Nebraska	8
Butler College, Indiana	11	University of Nebraska	11
University of Notre Dame, Indiana	11	New Hampshire College of Agriculture and Mechanic Arts	8
Taylor University, Indiana	5	College of St. Elizabeth, New Jersey	11
Iowa State Teachers College	7	Upsala College, New Jersey	3
Coe College, Iowa	11	University of New Mexico	11
Wartburg College, Iowa	.....	New York State College for Teachers	11
Des Moines College, Iowa	.....	Alfred University, New York	11
Drake University, Iowa	11	St. Stephen's University, New York	7
Parsons College, Iowa	9	Wells College, New York	11
State University of Iowa	11	St. Lawrence University, New York	11
Cornell College, Iowa	11	Elmira College, New York	11
Central University of Iowa	9	Hobart College, New York	11
Morningside College, Iowa	11	College of New Rochelle, New York	9
Buena Vista College, Iowa	11	Barnard College, New York	11
Midland College, Kansas	5	Columbia University, New York	11
College of Emporia, Kansas	11	College of the City of New York	11
Ottawa University, Kansas	11	Hunter College of the City of New York	11
Kansas Wesleyan University	8	New York University	11
Cooper College, Kansas	8	Vassar College, New York	11
Washburn College, Kansas	11	University of Rochester, New York	11
Southwestern College, Kansas	8	Union University, New York	11
Ogden College, Kentucky	7	University of North Carolina	11
Centre College, Kentucky	9	Davidson College, North Carolina	11
Georgetown College, Kentucky	9	Trinity College, North Carolina	11
University of Kentucky	11	Elon College, North Carolina	11
Transylvania College, Kentucky	7	Guilford College, North Carolina	9
University of Louisville, Kentucky	11	Shaw University (colored), North Carolina	8
Bethel College, Kentucky	5	Weaver College, North Carolina	.....
H. Sophie Newcomb Memorial College, Louisiana	11	Salem Academy and College, North Carolina	8
Loyola University, Louisiana	7	University of North Dakota	11
Bowdoin College, Maine	11	Municipal University of Akron, Ohio	11
Bates College, Maine	11	Ohio University	11
University of Maine	11	Baldwin Wallace College, Ohio	11
St. John's College, Maryland	11	Bluffton College, Ohio	10
Goucher College, Maryland	11	Cedarville College, Ohio	6
Johns Hopkins University, Maryland	11	University of Cincinnati, Ohio	11
Morgan College (colored), Maryland	4	Western Reserve University, Ohio	11
Washington College, Maryland	6	Capital University, Ohio	9
Rockhill College, Maryland	.....	St. Mary College, Ohio	9
Hood College, Maryland	8	Defiance College, Ohio	11
Maryland College for Women	6	Ohio Wesleyan University	11
Amherst College, Massachusetts	11	Kenyon College, Ohio	11
Boston University, Massachusetts	11	Marietta College, Ohio	11
Harvard University, Massachusetts	11	Muskingum College, Ohio	11
Smith College, Massachusetts	11	Miami University, Ohio	11
Wheaton College, Massachusetts	11	Oxford College for Women, Ohio	10
Mount Holyoke College, Massachusetts	11	Western College for Women, Ohio	10
Tufts College, Massachusetts	11		
Clark College, Massachusetts	11		

TABLE 4.—*Institutions having eleven specified departments or fewer, 1915–16*—Contd.

Institutions.	Number of departments.
Lake Erie College, Ohio	11
Rio Grande College, Ohio	5
Otterbein University, Ohio	11
College of Wooster, Ohio	11
Methodist University of Oklahoma	6
Kingfisher College, Oklahoma	9
University of Oklahoma	11
Albany College, Oregon	8
Pacific University, Oregon	11
McMinnville College, Oregon	8
Pacific College, Oregon	2
Reed College, Oregon	11
Willamette University, Oregon	10
Moravian College, Pennsylvania	4
Bryn Mawr College, Pennsylvania	11
Beaver College, Pennsylvania	6
Wilson College, Pennsylvania	8
Lafayette College, Pennsylvania	11
Pennsylvania College	11
Haverford College, Pennsylvania	11
Franklin and Marshall College, Pennsylvania	11
Lincoln University (colored), Pennsylvania	6
Allegheny College, Pennsylvania	11
Irving Female College, Pennsylvania	3
Albright College, Pennsylvania	7
Westminster College, Pennsylvania	11
Drexel Institute, Pennsylvania	.....
University of Pennsylvania	11
Susquehanna University, Pennsylvania	5
Pennsylvania State College	11
Swarthmore College, Pennsylvania	11
Washington and Jefferson College, Pennsylvania	11
Waynesburg College, Pennsylvania	10
College of Charleston, South Carolina	6
Columbia College, South Carolina	8
University of South Carolina	11
Furman University, South Carolina	10
Converse College, South Carolina	10
Wofford College, South Carolina	10
University of South Dakota	11
King College, Tennessee	7
University of Chattanooga, Tennessee	.....
Tusculum College, Tennessee	4
Knoxville College (colored), Tennessee	.....
Milligan College, Tennessee	6
Tennessee College	.....
George Peabody College for Teachers, Tennessee	4
Fisk University (colored), Tennessee	3
Vanderbilt University, Tennessee	11
University of the South, Tennessee	11
University of Texas	11
Howard Payne College, Texas	10
Rice Institute, Texas	11
Austin College, Texas	9
Baylor University, Texas	11
University of Utah	11
Middlebury College, Vermont	11
St. Michael's College, Vermont	7
Bridgewater College, Virginia	7
University of Virginia	11
Roanoke Institute, Virginia	.....
Emory and Henry College, Virginia	11
Hampden-Sidney College, Virginia	9
Hollins College, Virginia	8
Washington and Lee University, Virginia	11
Randolph-Macon Woman's College, Virginia	11
Richmond College, Virginia	11
Virginia Union University (colored)	6
College of William and Mary (Virginia)	7
University of Washington	11
Spokane College, Washington	.....
Davis and Elkins College, West Virginia	.....
Lawrence College, Wisconsin	11
Beloit College, Wisconsin	11
University of Wisconsin	11
Milton College, Wisconsin	6
Concordia College, Wisconsin	5
Milwaukee-Downer College, Wisconsin	11
Mission House, Wisconsin	.....
Campion College, Wisconsin	11
Ripon College, Wisconsin	11
St. Clara College and Academy, Wisconsin	6

SIZE OF FACULTY.

Suggested Requirement IV.—A college of arts and sciences should have a faculty of at least 15 members devoting full time to college work.

The ratio of instructors to students is also a significant factor in college efficiency. It will be noted that the strongest institutions provide one instructor to every 12 or 10 or even smaller number of students.

TABLE 5.—*Number of faculty members devoting full time to college instruction—Number of college students, 1915–16.*

Institutions.	Faculty.	Students.		
		Men.	Women.	Total.
University of Alabama	24	406	88	494
University of Arizona	28	209	141	350
Central College, Arkansas	15	0	55	55
Hendrix College, Arkansas	13	244	25	269
Pomona College, California	45	241	299	540
Occidental College, California	22	195	138	333
Mills College, California	34	0	187	187
University of Redlands, California	14	58	119	177
University of Santa Clara, California	2	93	0	93
Leland Stanford Junior University, California	145	1,644	556	2,200
University of Colorado	76	402	448	850
Colorado College	35	173	354	527
University of Denver, Colorado	28	270	310	580
Trinity College, Connecticut	25	235	0	235
Yale University, Connecticut	104	1,483	0	1,483
Gallaudet College, District of Columbia	16	48	30	78
George Washington University, District of Columbia	38	476	263	739
Howard University (colored), District of Columbia	24	262	71	333
University of Florida	17	96	0	96
Columbia College, Florida	15	46	47	93
Florida State College for Women	21	0	153	153
University of Georgia	31	278	0	278
Atlanta University (colored), Georgia	(1)	39	16	55
Cox College, Georgia	8	0	102	102
North Georgia Agricultural College	9	83	1	84
Agnes Scott College, Georgia	28	0	299	299
Piedmont College, Georgia	11	22	23	45
Bessie Tift College, Georgia	25	0	166	166
Brenau College, Georgia	16	0	198	198
Emory University, Georgia	16	244	0	244
Shorter College, Georgia	12	0	160	160
University of Idaho	40	134	223	357
Aurora College, Illinois	6	39	32	71
Illinois Wesleyan University	15	124	119	243
Blackburn College, Illinois	4	45	27	72
De Paul University, Illinois	13	36	324	360
Loyola University, Illinois	12	121	0	121
James Millikin University, Illinois	39	131	205	336
Knox College, Illinois	26	233	208	441
Illinois Woman's College	12	0	176	176
Lake Forest College, Illinois	20	102	92	194
Frances Shimer School, Illinois	1	0	33	33
Northwestern College, Illinois	11	160	91	251
Rockford College, Illinois	28	0	217	217
Augustana College, Illinois	7	136	61	197
Indiana University	233	1,701	968	2,669
Wabash College, Indiana	21	334	0	334
Earlham College, Indiana	34	170	202	372
Franklin College, Indiana	10	123	131	254
De Pauw University, Indiana	36	367	378	745
Butler College, Indiana	20	168	249	417
University of Notre Dame, Indiana	70	274	0	274
Taylor University, Indiana	26	65	49	114
Iowa State Teachers College	67	240	1,579	1,819
Coe College, Iowa	43	230	257	487
Wartburg College, Iowa	2	28	0	28
Des Moines College, Iowa	10	96	129	225
Drake University, Iowa	31	260	229	489
Parsons College, Iowa	12	81	74	155
State University of Iowa	148	812	765	1,577
Cornell College, Iowa	23	234	310	544
Central University of Iowa	6	29	31	60
Morningside College, Iowa	16	155	221	376
Buena Vista College, Iowa	4	29	36	65
Midland College, Kansas	12	45	55	100
College of Emporia, Kansas	18	120	123	243
Ottawa University, Kansas	11	94	110	204
Kansas Wesleyan University	18	84	90	174
Cooper College, Kansas	10	57	59	116
Washburn College, Kansas	18	196	225	421
Southwestern College, Kansas	21	152	124	276
Ogden College, Kentucky	6	50	0	50
Centre College, Kentucky	12	147	0	147
Georgetown College, Kentucky	21	157	109	266
University of Kentucky	28	162	156	318

[1] None reported devoting full time to college instruction.

TABLE 5.—*Number of faculty members devoting full time to college instruction—Number of college students, 1915–16*—Continued.

Institutions.	Faculty.	Students.		
		Men.	Women.	Total.
Transylvania College, Kentucky	26	163	88	251
University of Louisville, Kentucky	24	129	216	345
Bethel College, Kentucky	5	30	0	30
H. Sophie Newcomb Memorial College, Louisiana	29	0	273	273
Loyola University, Louisiana	10	45	0	45
Bowdoin College, Maine	28	400	0	400
Bates College, Maine	28	284	188	472
University of Maine	56	185	81	266
St. John's College, Maryland	10	100	0	100
Goucher College, Maryland	35	0	508	508
Johns Hopkins University, Maryland	49	195	0	195
Morgan College (colored), Maryland	3	27	22	49
Washington College, Maryland	9	82	7	89
Rock Hill College, Maryland	11	40	0	40
Hood College, Maryland	11	0	128	128
Maryland College for Women	8	0	89	89
Amherst College, Massachusetts	47	422	0	422
Boston University, Massachusetts	29	104	348	452
Harvard University, Massachusetts	.....	.....	.....	.....
Smith College, Massachusetts	130	0	1,725	1,725
Wheaton College, Massachusetts	27	0	206	206
Mount Holyoke College, Massachusetts	88	0	783	783
Tufts College, Massachusetts	33	216	0	216
Clark College, Massachusetts	28	177	0	177
Alma College, Michigan	19	88	90	178
University of Michigan	266	298	1,127	1,425
St. Johns University, Minnesota	13	200	0	200
Augsburg Seminary, Minnesota	2	31	0	31
Carleton College, Minnesota	35	211	235	446
Hamline University, Minnesota	18	224	194	418
Macalester College, Minnesota	22	159	137	296
College of St. Catherine, Minnesota	34	0	221	221
Gustavus Adolphus College, Minnesota	8	102	64	166
College of St. Teresa, Minnesota	26	0	104	104
Mississippi College	12	324	0	324
Meridian College, Mississippi	17	104	278	382
University of Mississippi	20	547	84	631
Stephens College, Missouri	12	0	145	145
Westminster College, Missouri	5	119	0	119
William Jewell College, Missouri	10	279	0	279
Park College, Missouri	15	119	142	261
Lindenwood Female College, Missouri	(1)	0	86	86
Forest Park College, Missouri	(1)	0	30	30
St. Louis University, Missouri	23	223	0	223
Washington University, Missouri	70	232	309	541
Drury College, Missouri	15	140	147	287
Central Wesleyan College, Missouri	18	60	35	95
University of Montana	40	149	238	387
Bellevue College, Nebraska	7	30	37	67
Union College, Nebraska	14	64	51	115
Doane College, Nebraska	16	70	63	133
University of Nebraska	89	940	926	1,866
New Hampshire College of Agriculture and Mechanic Arts	31	123	113	236
College of St. Elizabeth, New Jersey	30	0	110	110
Upsala College, New Jersey	3	8	6	14
University of New Mexico	16	81	66	147
New York State College for Teachers	46	164	855	1,019
Alfred University, New York	28	76	83	159
St. Stephens College, New York	6	52	0	52
Wells College, New York	31	0	202	202
St. Lawrence University, New York	16	132	137	269
Elmira College, New York	32	0	278	278
Hobart College, New York	26	138	98	236
College of New Rochelle, New York	21	0	193	193
Barnard College, New York	88	0	694	694
Columbia University, New York	133	1,256	0	1,256
College of the City of New York	128	2,229	0	2,229
Hunter College of the City of New York	118	0	1,943	1,943
New York University	47	278	0	278
Vassar College, New York	112	0	1,127	1,127
University of Rochester, New York	45	306	224	530
Union University, New York	40	521	0	521
University of North Carolina	52	544	5	549
Davidson College, North Carolina	13	357	0	357
Trinity College, North Carolina	28	428	89	517
Elon College, North Carolina	18	199	102	301
Guilford College, North Carolina	11	84	51	135

[1] None reported devoting full time to college instruction.

TABLE 5.—*Number of faculty members devoting full time to college instruction—Number of college students, 1915–16*—Continued.

Institutions.	Faculty.	Students.		
		Men.	Women.	Total.
Shaw University (colored), North Carolina	(1)	88	110	198
Weaver College, North Carolina	2	27	6	33
Salem Academy and College, North Carolina	20	0	189	189
University of North Dakota	49	166	116	282
Municipal University of Akron, Ohio	21	143	73	216
Ohio University	35	401	219	620
Baldwin-Wallace College, Ohio	19	136	108	244
Bluffton College, Ohio	14	52	64	116
Cedarville College, Ohio	4	35	33	68
University of Cincinnati, Ohio	236	501	890	1,391
Western Reserve University, Ohio	79	408	435	843
Capital University, Ohio	6	118	0	118
St. Mary College, Ohio	16	70	0	70
Defiance College, Ohio	13	99	116	215
Ohio Wesleyan University	58	545	464	1,009
Kenyon College, Ohio	14	151	0	151
Marietta College, Ohio	18	186	69	255
Muskingum College, Ohio	33	150	108	258
Miami University, Ohio	31	339	170	509
Oxford College for Women, Ohio	19	0	188	188
Western College for Women, Ohio	32	0	263	263
Lake Erie College, Ohio	21	0	133	133
Rio Grande College, Ohio	3	30	25	55
Otterbein University, Ohio	13	164	112	276
College of Wooster, Ohio	29	296	215	511
Methodist University of Oklahoma	7	36	28	64
Kingfisher College, Oklahoma	7	25	16	41
University of Oklahoma	63	797	776	1,573
Albany College, Oregon	9	31	31	62
Pacific University, Oregon	20	54	53	107
McMinnville College, Oregon	8	50	39	89
Pacific College, Oregon	4	22	26	48
Reed College, Oregon	19	110	147	257
Willamette University, Oregon	13	112	118	230
Moravian College, Pennsylvania	8	41	0	41
Bryn Mawr College, Pennsylvania	43	0	453	453
Beaver College, Pennsylvania	6	0	50	50
Wilson College, Pennsylvania	24	0	172	172
Lafayette College, Pennsylvania	50	477	0	477
Pennsylvania College	26	317	14	331
Haverford College, Pennsylvania	25	186	0	186
Franklin and Marshall College, Pennsylvania	16	291	0	291
Lincoln University (colored), Pennsylvania	13	163	0	163
Allegheny College, Pennsylvania	25	241	164	405
Irving Female College, Pennsylvania	10	0	31	31
Albright College, Pennsylvania	4	131	28	159
Westminster College, Pennsylvania	20	108	84	192
Drexel Institute, Pennsylvania	64	150	391	541
University of Pennsylvania	154	638	380	1,018
Susquehanna University, Pennsylvania	22	128	28	156
Pennsylvania State College	93	332	42	374
Swarthmore College, Pennsylvania	39	127	237	364
Washington and Jefferson College, Pennsylvania	32	333	0	333
Waynesburg College, Pennsylvania	11	49	55	104
College of Charleston, South Carolina	8	80	0	80
Columbia College, South Carolina	19	0	123	123
University of South Carolina	32	323	32	355
Furman University, South Carolina	11	205	0	205
Converse College, South Carolina	12	0	153	153
Wofford College, South Carolina	13	324	0	324
University of South Dakota	34	150	223	373
King College, Tennessee	6	60	0	60
University of Chattanooga, Tennessee	9	108	77	185
Tusculum College, Tennessee	5	45	48	93
Knoxville College (colored), Tennessee	(1)	26	15	41
Milligan College, Tennessee	9	98	42	140
Tennessee College	4	0	94	94
George Peabody College for Teachers, Tennessee	100	413	1,099	1,512
Fisk University (colored), Tennessee	18	95	84	179
Vanderbilt University, Tennessee	35	260	72	332
University of the South, Tennessee	18	160	0	160
University of Texas	117	882	811	1,693
Howard Payne College, Texas	7	65	49	114
Rice Institute, Texas	41	264	119	383
Austin College, Texas	8	108	0	108
Baylor University, Texas	66	243	268	511

[1] None reported devoting full time to college instruction.

TABLE 5.—*Number of faculty members devoting full time to college instruction—Number of college students 1915–16*—Continued.

Institutions.	Faculty.	Students.		
		Men.	Women.	Total.
University of Utah	37	764	838	1,602
Middleburg College, Vermont	30	187	156	343
St. Michael's College, Vermont	5	20	0	20
Bridgewater College, Virginia	11	42	30	72
University of Virginia	59	523	0	523
Roanoke Institute, Virginia	8	31	0	31
Emory and Henry College, Virginia	10	176	0	176
Hampden-Sidney College, Virginia	10	118	0	118
Hollins College, Virginia	12	0	106	106
Washington and Lee University, Virginia	28	369	0	369
Randolph-Macon Woman's College, Virginia	46	0	624	624
Richmond College, Virginia	29	268	117	385
Virginia Union University (colored)	9	62	7	69
College of William and Mary, Virginia	13	178	0	178
University of Washington	124	813	1,042	1,855
Spokane College, Washington	(1)	2	8	10
Davis and Elkins College, West Virginia	18	34	22	56
Lawrence College, Wisconsin	35	294	270	564
Beloit College, Wisconsin	41	246	142	388
University of Wisconsin	276	1,692	1,109	2,801
Milton College, Wisconsin	7	33	39	72
Concordia College, Wisconsin	1	54	0	54
Milwaukee-Downer College, Wisconsin	35	0	234	234
Mission-House, Wisconsin	9	38	1	39
Campion College, Wisconsin	13	80	0	80
Ripon College, Wisconsin	25	165	94	259
St. Clara College and Academy, Wisconsin	8	0	69	69

[1] None reported devoting full time to college instruction.

SEPARATION OF COLLEGE AND PREPARATORY DEPARTMENT.

Suggested Requirement V.—If a college of arts and sciences maintains an academy or preparatory department, this department should be "distinct in students, faculty, and discipline." Exception may be made, as noted above, of certain denominational institutions whose traditions and policy require the inclusion of secondary education with collegiate education under the same institutional control. In such cases the preparatory department should be administratively separated from the college department.

TABLE 6.—*Faculty and number giving part time to preparatory work, 1915–16.*

Institutions.	Faculty.	Number giving part time to preparatory work.	Institutions.	Faculty.	Number giving part time to preparatory work.
University of Alabama	24	0	Gallaudet College, District of Columbia	16	0
University of Arizona	28	0	George Washington University, District of Columbia	38	0
Central College, Arkansas	18	3	Howard University (colored), District of Columbia	25	1
Hendrix College, Arkansas	13	0	University of Florida	17	0
Pomona College, California	45	0	Columbia College, Florida	20	5
Occidental College, California	22	0	Florida State College for Women	21	0
Mills College, California	34	0	University of Georgia	31	0
University of Redlands, California	20	6	Atlanta University (colored), Georgia	17	17
University of Santa Clara, California	8	2	Cox College, Georgia	11	3
Leland Stanford Junior University, California	145	0	North Georgia Agriculture College	14	5
University of Colorado	76	0	Agnes Scott College, Georgia	28	0
Colorado College	35	0	Piedmont College, Georgia	16	5
University of Denver, Colorado	31	3			
Trinity College, Connecticut	25	0			
Yale University, Connecticut	104	0			

TABLE 6.—*Faculty and number giving part time to preparatory work, 1915–16*—Contd.

Institutions.	Faculty.	Number giving part time to preparatory work.
Bessie Tift College, Georgia	25	0
Brenau Colleg, Georgia	16	0
Emory University, Georgia	16	0
Shorter College, Georgia	12	0
University of Idaho	40	6
Aurora College, Illinois	12	0
Illinois Wesleyan College	18	3
Blackburn College, Illinois	12	8
De Paul University, Illinois	20	7
Loyola University, Illinois	18	6
James Millikin University, Illinois	39	.....
Knox College, Illinois	26	0
Illinois Woman's College	16	4
Lake Forest College, Illinois	20	0
Frances Shimer School, Illinois	18	17
Northwestern College, Illinois	12	1
Rockford College, Illinois	28	0
Augustana College, Illinois	14	7
Indiana University	233	0
Wabash College, Indiana	21	0
Earlham College, Indiana	34	8
Franklin College, Indiana	18	1
De Pauw University, Indiana	37	0
Butler College, Indiana	20	0
University of Notre Dame, Indiana	80	10
Taylor University, Indiana	21	0
Iowa State Teachers College	98	31
Coe College, Iowa	43	0
Wartburg College, Iowa	9	7
Des Moines College, Iowa	12	2
Drake University, Iowa	31	0
Parsons College, Iowa	12	0
State University of Iowa	148	0
Cornell College, Iowa	31	8
Central University of Iowa	17	11
Morningside College, Iowa	19	3
Buena Vista College, Iowa	10	6
Midland College, Kansas	18	6
College of Emporia, Kansas	18	0
Ottawa University, Kansas	11	0
Kansas Wesleyan University	23	5
Cooper College, Kansas	10	0
Washburn College, Kansas	24	6
Southwestern College, Kansas	24	3
Ogden College, Kentucky	8	2
Centre College, Kentucky	12	0
Georgetown College, Kentucky	26	5
University of Kentucky	28	0
Transylvania College, Kentucky	26	0
University of Louisville, Kentucky	24	0
Bethel College, Kentucky	6	1
H. Sophie Newcomb Memorial College, Louisiana	29	0
Loyola University, Louisiana	10	0
Bowdoin College, Maine	28	0
Bates College, Maine	28	0
University of Maine	56	0
St. John's College, Maryland	13	2
Goucher College, Maryland	35	0
Johns Hopkins University, Maryland	49	0
Morgan College (colored), Maryland	8	5
Washington College, Maryland	9	0
Rock Hill College, Maryland	15	4
Hood College, Maryland	15	4
Maryland College for Women	11	3
Amherst College, Massachusetts	47	0
Boston University, Massachusetts	29	0
Harvard University, Massachusetts	.....	
Smith College, Massachusetts	130	0
Wheaton College, Massachusetts	27	0
Mount Holyoke College, Massachusetts	88	0
Tufts College, Massachusetts	248	0
Clark College, Massachusetts	28	0
Alma College, Michigan	19	0
University of Michigan	266	5
St. John's University, Minnesota	18	0
Augsburg Seminary, Minnesota	18	16
Carleton College, Minnesota	35	0
Hamline University, Minnesota	18	0
Macalester College, Minnesota	22	0
College of St. Catherine, Minnesota	35	0
Gustavus Adolphus College, Minnesota	15	11
College of St. Teresa, Minnesota	41	7
Mississippi College	12	5
Meridian College, Mississippi	17	.....
University of Mississippi	20	0
Stephens College, Missouri	16	5
Westminster College, Missouri	13	5
William Jewell College, Missouri	16	6
Park College, Missouri	19	4
Lindenwood Female College, Missouri	12	12
Forest Park College, Missouri	24	7
St. Louis University, Missouri	26	3
Washington University, Missouri	70	0
Drury College, Missouri	15	0
Central Wesleyan College, Missouri	23	5
University of Montana	40	0
Bellevue College, Nebraska	14	7
Union College, Nebraska	26	12
Doane College, Nebraska	18	2
University of Nebraska	95	6
New Hampshire College of Agriculture and Mechanic Arts	31	0
College of Saint Elizabeth, New Jersey	34	4
Upsala College, New Jersey	12	9
University of New Mexico	20	4
New York State College for Teachers	52	6
Alfred University, New York	28	0
St. Stephen's College, New York	9	3
Wells College, New York	31	0
St. Lawrence University, New York	16	0
Elmira College, New York	32	0
Hobart College, New York	26	0
College of New Rochelle, New York	22	1
Barnard College, New York	88	0
Columbia University, New York	133	0
College of the City of New York	142	14
Hunter College of the City of New York	118	0
New York University	47	0
Vassar College, New York	112	0
University of Rochester, New York	45	0
Union University, New York	40	0
University of North Carolina	52	0
Davidson College, North Carolina	13	0
Trinity College, North Carolina	28	0
Elon College, North Carolina	27	9
Guilford College, North Carolina	17	9
Shaw University (colored), North Carolina	29	29
Weaver College, North Carolina	8	6
Salem Academy and College, North Carolina	35	15
University of North Dakota	55	6
Municipal University of Akron, Ohio	21	0
Ohio University	36	1
Baldwin-Wallace College, Ohio	19	.....
Bluffton College, Ohio	16	2
Cedarville College, Ohio	7	3
University of Cincinnati, Ohio	236	0

TABLE 6.—*Faculty and number giving part time to preparatory work, 1915–16*—Contd.

Institutions.	Faculty.	Number giving part time to preparatory work.
Western Reserve University, Ohio	79	0
Capital University, Ohio	14	8
St. Mary College, Ohio	16	.....
Defiance College, Ohio	16	3
Ohio Wesleyan University	59	1
Kenyon College, Ohio	14	0
Marietta College, Ohio	18	0
Muskingum College, Ohio	38	5
Miami University, Ohio	31	0
Oxford College for Women, Ohio	19	0
Western College for Women, Ohio	32	0
Lake Erie College, Ohio	21	0
Rio Grande College, Ohio	10	7
Otterbein University, Ohio	17	4
College of Wooster, Ohio	32	3
Methodist University of Oklahoma	9	2
Kingfisher College, Oklahoma	9	2
University of Oklahoma	63	0
Albany College, Oregon	13	4
Pacific University, Oregon	20	0
McMinnville College, Oregon	16	8
Pacific College, Oregon	10	6
Reed College, Oregon	19	0
Willamette University, Oregon	13	.....
Moravian College, Pennsylvania	8	.....
Bryn Mawr College, Pennsylvania	43	.....
Beaver College, Pennsylvania	8	2
Wilson College, Pennsylvania	24	0
Lafayette College, Pennsylvania	50	0
Pennsylvania College	26	.....
Haverford College, Pennsylvania	25	0
Franklin and Marshall College, Pennsylvania	16	0
Lincoln University (colored), Pennsylvania	13	0
Allegheny College, Pennsylvania	25	0
Irving Female College, Pennsylvania	19	9
Albright College, Pennsylvania	10	6
Westminster College, Pennsylvania	20	.....
Drexel Institute, Pennsylvania	69	5
University of Pennsylvania	154	0
Susquehanna University, Pennsylvania	23	1
Pennsylvania State College	93	0
Swarthmore College, Pennsylvania	39	0
Washington and Jefferson College, Pennsylvania	32	0
Waynesburg College, Pennsylvania	11	.....
College of Charleston, South Carolina	8	0
Columbia College, South Carolina	21	2
University of South Carolina	32	0
Furman University, South Carolina	11	0
Converse College, South Carolina	13	0
Wofford College, South Carolina	13	1
University of South Dakota	36	2
King College, Tennessee	8	2
University of Chattanooga, Tennessee	9	.....
Tusculum College, Tennessee	11	6
Knoxville College (colored), Tennessee	8	8
Milligan College, Tennessee	10	1
Tennessee College	6	2
George Peabody College for Teachers, Tennessee	100	.....
Fisk University (colored), Tennessee	32	14
Vanderbilt University, Tennessee	35	0
University of the South, Tennessee	18	0
University of Texas	117	0
Howard Payne College, Texas	7	.....
Rice Institute, Texas	41	0
Austin College, Texas	10	2
Baylor University, Texas	66	.....
University of Utah	37	.....
Middlebury College, Vermont	30	0
St. Michael's College, Vermont	11	6
Bridgewater College, Virginia	13	2
University of Virginia	59	0
Roanoke Institute, Virginia	8	.....
Emory and Henry College, Virginia	10	.....
Hampden-Sidney College, Virginia	10	.....
Hollins College, Virginia	12	.....
Washington and Lee University, Virginia	28	0
Randolph-Macon Woman's College, Virginia	46	0
Richmond College, Virginia	29	0
Virginia Union University (colored)	12	3
College of William and Mary, Virginia	15	2
University of Washington	124	0
Spokane College, Washington	6	6
Davis and Elkins College, West Virginia	29	11
Lawrence College, Wisconsin	35	0
Beloit College, Wisconsin	41	0
University of Wisconsin	288	7
Milton College, Wisconsin	14	7
Concordia College, Wisconsin	9	8
Milwaukee-Downer College, Wisconsin	35	0
Mission House, Wisconsin	9	0
Campion College, Wisconsin	15	2
Ripon College, Wisconsin	25	0
St. Clara College and Academy, Wisconsin	14	9

ADVANCED DEGREES OF FACULTY MEMBERS.

Suggested Requirement VI.—Members of the faculty of a college of arts and sciences should have pursued graduate study in addition to the bachelor's degree. At least one-fourth of the faculty should hold the degree of doctor of philosophy or degrees representing equivalent scholarly attainments *bestowed by reputable graduate schools.* At least three-fourths of the faculty should have secured the master's degree in course at a reputable graduate school.

TABLE 7.—*Faculty—Number holding bachelor's degree, master's degree, and doctor's degree (excluding honorary degrees), 1915–16.*

Institutions.	Total number of members of faculty.	Number holding only bachelor's degree.	Number holding master's degree and none higher.	Number holding doctor's degree (excluding honorary degrees).
University of Alabama	24	5	8	10
University of Arizona	28	7	10	6
Central College, Arkansas	18	6	3	1
Hendrix College, Arkansas	13	7	6	0
Pomona College, California	45	17	12	12
Occidental College, California	22	5	6	8
Mills College, California	34	11	7	5
University of Redlands, California	20	7	6	0
University of Santa Clara, California	8	.....	.....	.....
Leland Stanford Junior University, California	145	28	37	71
University of Colorado	76	22	23	24
Colorado College	35	9	14	8
University of Denver, Colorado	31	7	11	10
Trinity College, Connecticut	25	4	9	13
Yale University, Connecticut	104	4	16	82
Gallaudet College, District of Columbia	16	4	6	7
George Washington University, District of Columbia	38	4	9	14
Howard University (colored), District of Columbia	25	12	11	2
University of Florida	17	4	2	10
Columbia College, Florida	20	6	1	1
Florida State College for Women	21	5	5	7
University of Georgia	31	3	13	13
Atlanta University (colored), Georgia	17	4	3	1
Cox College, Georgia	11	5	9	1
North Georgia Agricultural College	14	7	2	0
Agnes Scott College, Georgia	28	3	13	8
Piedmont College, Georgia	16	11	2	0
Bessie Tift College, Georgia	25	18	2	1
Brenau College, Georgia	16	6	8	1
Emory University, Georgia	16	7	4	5
Shorter College, Georgia	12	9	4	0
University of Idaho	40	14	10	11
Aurora College, Illinois	12	6	0	2
Illinois Wesleyan University	18	5	8	1
Blackburn College, Illinois	12	9	1	1
De Paul University, Illinois	20	3	12	2
Loyola University, Illinois	18	.....	.....	.....
James Millikin University, Illinois	39	17	6	8
Knox College, Illinois	26	8	10	8
Illinois Woman's College	16	7	9	0
Lake Forest College, Illinois	20	5	7	7
Frances Shimer School, Illinois	18	8	3	1
Northwestern College, Illinois	12	2	9	1
Rockford College, Illinois	28	8	7	7
Augustana College, Illinois	14	4	6	1
Indiana University	233	28	59	55
Wabash College, Indiana	21	1	7	4
Earlham College, Indiana	34	9	12	11
Franklin College, Indiana	18	2	12	1
De Pauw University, Indiana	37	10	14	9
Butler College, Indiana	20	4	6	10
University of Notre Dame, Indiana	80	30	15	5
Taylor University, Indiana	21	10	2	2
Iowa State Teachers College	98	35	31	8
Coe College, Iowa	43	9	13	4
Wartburg College, Iowa	9	5	2	0
Des Moines College, Iowa	12	12	8	6
Drake University, Iowa	31	4	10	10
Parsons College, Iowa	12	3	8	1
State University of Iowa	148	27	51	50
Cornell College, Iowa	31	8	14	5
Central University of Iowa	17	6	6	2
Morningside College, Iowa	19	2	11	6
Buena Vista College, Iowa	10	10	3	7
Midland College, Kansas	18	4	8	2
College of Emporia, Kansas	18	5	11	1
Ottawa University, Kansas	11	3	7	1
Kansas Wesleyan University	23	1	10	1
Cooper College, Kansas	10	4	6	0
Washburn College, Kansas	24	8	12	8
Southwestern College, Kansas	24	4	8	2
Ogden College, Kentucky	8	.....	3	0
Centre College, Kentucky	12	1	1	10

TABLE 7.—*Faculty—Number holding bachelor's degree, master's degree, and doctor's degree (excluding honorary degrees), 1915–16*—Continued.

Institutions.	Total number of members of faculty.	Number holding only bachelor's degree.	Number holding master's degree and none higher.	Number holding doctor's degree (excluding honorary degrees).
Georgetown College, Kentucky	26	9	7	1
University of Kentucky	28	18	15	6
Transylvania College, Kentucky	26	9	9	6
University of Louisville, Kentucky	24	6	6	7
Bethel College, Kentucky	6	6	4	1
H. Sophie Newcomb Memorial College, Louisiana	29	3	9	11
Loyola University, Louisiana	10	.....	.....	.....
Bowdoin College, Maine	28	3	12	12
Bates College, Maine	28	5	17	5
University of Maine	56	16	20	20
St. John's College, Maryland	13	2	9	16
Goucher College, Maryland	35	6	8	20
Johns Hopkins University, Maryland	49	1	1	46
Morgan College (colored), Maryland	8	4	0	2
Washington College, Maryland	9	1	4	3
Rock Hill College, Maryland	15	8	4	1
Hood College, Maryland	15	5	7	1
Maryland College for Women	11	6	1	1
Amherst College, Massachusetts	47	6	14	26
Boston University, Massachusetts	29	4	5	16
Harvard University, Massachusetts	.....	.....	.....	.....
Smith College, Massachusetts	130	21	37	55
Wheaton College, Massachusetts	27	4	6	9
Mount Holyoke College, Massachusetts	88	14	22	37
Tufts College, Massachusetts	248	4	14	11
Clark College, Massachusetts	28	3	6	18
Alma College, Michigan	19	4	7	3
University of Michigan	266	75	66	120
St. John's University, Minnesota	18	.....	.....	.....
Augsburg Seminary, Minnesota	18	6	8	1
Carleton College, Minnesota	35	8	8	19
Hamline University, Minnesota	18	4	8	6
Macalester College, Minnesota	22	4	10	4
College of St. Catherine, Minnesota	35	11	19	7
Gustavus Adolphus College, Minnesota	15	3	3	4
College of St. Teresa, Minnesota	41	8	10	2
Mississippi College	12	3	7	2
Meridian College, Mississippi	17	16	1	0
University of Mississippi	20	3	9	8
Stephens College, Missouri	16	10	2	0
Westminister College, Missouri	13	3	7	1
William Jewell College, Missouri	16	2	6	8
Park College, Missouri	19	6	11	1
Lindenwood Female College, Missouri	12	8	2	1
Forest Park College, Missouri	24	6	11	1
St. Louis University, Missouri	26	.....	2	.....
Washington University, Missouri	70	16	12	10
Drury College, Missouri	15	2	6	7
Central Wesleyan College, Missouri	23	5	9	1
University of Montana	40	14	12	10
Bellevue College, Nebraska	14	7	3	2
Union College, Nebraska	26	6	6	0
Doane College, Nebraska	18	7	5	3
University of Nebraska	95	13	38	38
New Hampshire College of Agriculture and Mechanic Arts	31	18	6	4
College of St. Elizabeth, New Jersey	34	8	8	4
Upsala College, New Jersey	12	4	4	0
University of New Mexico	20	13	3	3
New York State College for Teachers	52	52	23	10
Alfred University of New York	28	8	16	2
St. Stephen's College, New York	9	3	5	1
Wells College, New York	31	7	10	9
St. Lawrence University, New York	16	4	8	3
Elmira College, New York	32	13	8	8
Hobart College, New York	26	5	11	8
College of New Rochelle, New York	22	5	5	7
Barnard College, New York	88	10	23	54
Columbia University, New York	133	17	24	90
College of the City of New York	142	33	21	70
Hunter College of the City of New York	118	28	54	16
New York University	47	9	17	21
Vassar College, New York	112	21	22	57
University of Rochester, New York	45	13	14	16
Union University, New York	40	9	15	15

TABLE 7.—*Faculty—Number holding bachelor's degree, master's degree, and doctor's degree (excluding honorary degrees), 1915–16*—Continued.

Institutions.	Total number of members of faculty.	Number holding only bachelor's degree.	Number holding master's degree and none higher.	Number holding doctor's degree (excluding honorary degrees).
University of North Carolina	52	4	21	28
Davidson College, North Carolina	13	1	4	7
Trinity College, North Carolina	28	7	9	12
Elon College, North Carolina	27	5	11	4
Guilford College, North Carolina	17	9	7	1
Shaw University (colored), North Carolina	29	7	1	0
Weaver College, North Carolina	8	3	2	0
Salem Academy and College, North Carolina	35	17	2	0
University of North Dakota	55	11	15	24
Municipal University of Akron, Ohio	21	5	10	3
Ohio University	36	6	15	8
Baldwin-Wallace College, Ohio	19	4	11	4
Bluffton College, Ohio	16	9	7	4
Cedarville College, Ohio	7	7	4	3
University of Cincinnati, Ohio	236	4	18	41
Western Reserve University, Ohio	79	79	9	13
Capital University, Ohio	14	3	7	3
St. Mary College, Ohio	16	2	4	7
Defiance College, Ohio	16	4	6	4
Ohio Wesleyan University	59	15	20	17
Kenyon College, Ohio	14	1	5	8
Marietta College, Ohio	18	5	2	7
Muskingum College, Ohio	38	6	11	7
Miami University, Ohio	31	7	8	16
Oxford College for Women, Ohio	19	4	1	7
Western College for Women, Ohio	32	12	10	6
Lake Erie College, Ohio	21	6	9	3
Rio Grande College, Ohio	10	4	3	1
Otterbein University, Ohio	17	2	7	6
College of Wooster, Ohio	32	11	12	8
Methodist University of Oklahoma	9	4	3	1
Kingfisher College, Oklahoma	9	3	5	1
University of Oklahoma	63	20	24	18
Albany College, Oregon	13	1	8	2
Pacific University, Oregon	20	7	5	1
McMinnville College, Oregon	16	6	3	0
Pacific College, Oregon	10	10	0	0
Reed College, Oregon	19	3	3	12
Willamette University, Oregon	13	1	7	4
Moravian College, Pennsylvania	8	2	1	5
Bryn Mawr College, Pennsylvania	43	1	3	39
Beaver College, Pennsylvania	8	1	7	0
Wilson College, Pennsylvania	24	8	10	5
Lafayette College, Pennsylvania	50	23	11	13
Pennsylvania College	26	6	7	11
Haverford College, Pennsylvania	25	2	5	15
Franklin and Marshall College, Pennsylvania	16	2	10	4
Lincoln University (colored), Pennsylvania	13	7	5	3
Allegheny College, Pennsylvania	25	4	9	10
Irving Female College, Pennsylvania	19	2	5	1
Albright College, Pennsylvania	10	2	6	2
Westminster College, Pennsylvania	20	2	7	1
Drexel Institute, Pennsylvania	69	25	9	1
University of Pennsylvania	154	14	23	114
Susquehanna University, Pennsylvania	23	4	11	3
Pennsylvania State College	93	23	42	22
Swarthmore College, Pennsylvania	39	8	10	19
Washington and Jefferson College, Pennsylvania	32	3	7	11
Waynesburg College, Pennsylvania	11	2	8	1
College of Charleston, South Carolina	8	3	3	2
Columbia College, South Carolina	21	2	7	2
University of South Carolina	32	6	12	9
Furman University, South Carolina	11	2	3	2
Converse College, South Carolina	13	4	5	3
Wofford College, South Carolina	13	2	5	6
University of South Dakota	36	11	14	10
King College, Tennessee	8	1	6	0
University of Chattanooga, Tennessee	9	0	5	4
Tusculum College, Tennessee	11	5	2	0
Knoxville College (colored), Tennessee	8	4	4	0
Milligan College, Tennessee	10	2	5	0
Tennessee College	6	2	3	1
George Peabody College for Teachers, Tennessee	100	23	21	33

TABLE 7.—*Faculty—Number holding bachelor's degree, master's degree, and doctor's degree (excluding honorary degrees), 1915–16*—Continued.

Institutions.	Total number of members of faculty.	Number holding only bachelor's degree.	Number holding master's degree and none higher.	Number holding doctor's degree (excluding honorary degrees).
Fisk University (colored), Tennessee	32	15	4	2
Vanderbilt University, Tennessee	35	9	8	18
University of the South, Tennessee	18	3	5	9
University of Texas	117	14	38	59
Howard Payne College, Texas	7	2	5	0
Rice Institute, Texas	41	13	9	18
Austin College, Texas	10	3	6	1
Baylor University, Texas	66	25	10	6
University of Utah	37	11	12	9
Middlebury College, Vermont	30	12	14	6
St. Michael's College, Vermont	11	7	2	0
Bridgewater College, Virginia	13	5	3	3
University of Virginia	59	10	13	21
Roanoke Institute, Virginia	8	5	2	1
Emory and Henry College, Virginia	10	2	4	4
Hampden-Sidney College, Virginia	10	1	3	4
Hollins College, Virginia	12	5	3	3
Washington and Lee University, Virginia	28	7	4	14
Randolph-Macon Woman's College, Virginia	46	13	10	12
Richmond College, Virginia	29	4	11	14
Virginia Union University (colored)	12	8	3	1
College of William and Mary, Virginia	15	3	9	3
University of Washington	124	25	33	61
Spokane College, Washington	6	4	0	0
Davis and Elkins College, West Virginia	29	5	3	1
Lawrence College, Wisconsin	35	7	10	16
Beloit College, Wisconsin	41	5	13	22
University of Wisconsin	283	48	98	138
Milton College, Wisconsin	14	3	9	0
Concordia College, Wisconsin	9	0	0	1
Milwaukee-Downer College, Wisconsin	35	8	8	4
Mission House, Wisconsin	9	0	3	2
Campion College, Wisconsin	15	10	2	0
Ripan College, Wisconsin	25	15	6	4
St. Clara College and Academy, Wisconsin	14	7	3	1

TEACHING HOURS OF FACULTY.

Suggested Requirement VII.—Fifteen hours of teaching a week should be regarded as the maximum program of a college teacher.

TABLE 8.—*Faculty—Number of teaching hours, 1915–16*

Institutions.	Faculty.	Average number of teaching hours per week for those having independent charge of classes.	Number teaching more than 15 credit hours a week.
University of Alabama	24	13	4
University of Arizona	28	15	0
Central College, Arkansas	18	13	2
Hendrix College, Arkansas	13	17	9
Pomona College, California	45	13	0
Occidental College, California	22	15	2
Mills College, California	34	13	4
University of Redlands, California	20	16	2
University of Santa Clara, California	8	12	.....
Leland Standford Junior University, California	145	11	.....
University of Colorado	76	9	4
Colorado College	35	14	5
University of Denver, Colorado	31	13	2
Trinity College, Connecticut	25	15	.....
Yale University, Connecticut	104	15	.....
Gallaudet College, District of Columbia	16	.....	.....
George Washington University, District of Columbia	38	13	4
Howard University (colored), District of Columbia	25	13	1
University of Florida	17	13	6
Columbia College, Florida	20	24	10
Florida State College for Women	21	16	.....
University of Georgia	31	15	17
Atlanta University (colored), Georgia	17	6	0
Cox College, Georgia	11	16	11
North Georgia Agricultural College	14	.....	.....
Agnes Scott College, Georgia	28	11	0
Piedmont College, Georgia	16	15	0
Bessie Tift College, Georgia	25	4	5
Brenau College, Georgia	16	12	1
Emory University, Georgia	16	10	0
Shorter College, Georgia	12	16	4
University of Idaho	40	10	5
Aurora College, Illinois	12	20	5
Illinois Wesleyan University	18	16	7
Blackburn College, Illinois	12	15	4
De Paul University, Illinois	20	10	1
Loyola University, Illinois	18	10	0
James Millikin University, Illinois	39	.....	11
Knox College, Illinois	26	11	6
Illinois Woman's College	16	14	1
Lake Forest College, Illinois	20	11	1
Frances Shimer School, Illinois	18	20	14
Northwestern College, Illinois	12	16	9
Rockford College, Illinois	28	13	4
Augustana College, Illinois	14	18	11
Indiana University	233	13	23
Wabash College, Indiana	21	15	4
Earlham College, Indiana	34	12	7
Franklin College, Indiana	18	10	7
De Pauw University, Indiana	37	.....	8
Butler College, Indiana	20	15	13
University of Notre Dame, Indiana	80	10	5
Taylor University, Indiana	21	.....	11
Iowa State Teachers College	98	.....	.....
Coe College, Iowa	43	16	8
Wartburg College, Iowa	9	20	6
Des Moines College, Iowa	12	17	6
Drake University, Iowa	31	15	1
Parsons College, Iowa	12	13	2
State University of Iowa	148	16	12
Cornell College, Iowa	31	.....	7
Central University of Iowa	17	15	6
Morningside College, Iowa	19	16	8
Buena Vista College, Iowa	10	15	4
Midland College, Kansas	18	17	9
College of Emporia, Kansas	18	17	8

TABLE 8.—*Faculty—Number of teaching hours, 1915–16*—Continued.

Institutions.	Faculty.	Average number of teaching hours per week for those having independent charge of classes.	Number teaching more than 15 credit hours a week
Ottawa University, Kansas	11	17	6
Kansas Wesleyan University	23	15	6
Cooper College, Kansas	10	17	9
Washburn College, Kansas	24	15	5
Southwestern College, Kansas	24	14	3
Ogden College, Kentucky	8	20	0
Centre College of Kentucky	12	13	1
Georgetown College, Kentucky	26	12	0
University of Kentucky	28	15	7
Transylvania College, Kentucky	26	14	6
University of Louisville, Kentucky	24	.....	2
Bethel College, Kentucky	6	16	3
H. Sophie Newcomb Memorial College, Louisiana	29	13	5
Loyola University, Louisiana	10	.....	0
Bowdoin College, Maine	23	11	4
Bates College, Maine	28	12	0
University of Maine	56	14	3
St. John's College, Maryland	13	19	5
Goucher College, Maryland	35	.....	3
Johns Hopkins University, Maryland	49	.....	.....
Morgan College (Colored), Maryland	8	10	1
Washington College, Maryland	9	16	5
Rock Hill College, Maryland	15	16	5
Hood College, Maryland	15	13	2
Maryland College for Women	11	20	3
Amherst College, Massachusetts	47	.....	0
Boston University, Massachusetts	29	.....	3
Harvard University, Massachusetts	.....	.....	.....
Smith College, Massachusetts	130	10	1
Wheaton College, Massachusetts	27	11	0
Mount Holyoke College, Massachusetts	88	9	0
Tufts College, Massachusetts	248	10	5
Clark College, Massachusetts	28	10	1
Alma College, Michigan	19	10	4
University of Michigan	266	12	.....
St. John's University, Minnesota	.....	.....	.....
Augsburg Seminary, Minnesota	18	18	5
Carleton College, Minnesota	35	12	3
Hamline University, Minnesota	18	.....	2
Macalester College, Minnesota	22	16	7
College of St. Catherine, Minnesota	35	.....	3
Gustavus Adolphus College, Minnesota	15	18	11
College of St. Teresa, Minnesota	41	15	0
Mississippi College	12	.....	6
Meridian College, Mississippi	17	.....	.....
University of Mississippi	20	14	4
Stephens College, Missouri	16	14	0
Westminster College, Missouri	13	18	0
William Jewell College, Missouri	16	15	10
Park College, Missouri	19	14	1
Lindenwood Female College, Missouri	12	13	8
Forest Park College, Missouri	24	.....	0
St. Louis University, Missouri	26	11	0
Washington University, Missouri	70	11	1
Drury College, Missouri	15	14	5
Central Wesleyan College, Missouri	23	13	9
University of Montana	40	.....	6
Bellevue College, Nebraska	14	17	4
Union College, Nebraska	26	20	12
Doane College, Nebraska	18	11	5
University of Nebraska	95	13	25
New Hampshire College of Agriculture and Mechanic Arts	31	13	4
College of St. Elizabeth, New Jersey	34	10	.....
Upsala College, New Jersey	12	24	8
University of New Mexico	20	14	8
New York State College for Teachers	52	14	0
Alfred University, New York	28	11	0
St. Stephens College, New York	9	0	2
Wells Colleges, New York	31	13	2
St. Lawrence University, New York	16	17	7
Elmira College, New York	32	13	0
Hobart College, New York	26	14	3
College of New Rochelle, New York	22	.....	.....

TABLE 8.—*Faculty—Number of teaching hours, 1915–16*—Continued.

Institutions.	Faculty.	Average number of teaching hours per week for those having independent charge of classes.	Number teaching more than 15 credit hours a week.
Barnard College, New York	88		
Columbia University, New York	133		
College of the City of New York	142	12	38
Hunter College of the City of New York	118	16	45
New York University	47		10
Vassar College, New York	112	13	0
University of Rochester, New York	45	12	0
Union University, New York	40	15	10
University of North Carolina	52	11	3
Davidson College, North Carolina	13	15	8
Trinity College, North Carolina	28	12	1
Elon College, North Carolina	27		11
Guilford College, North Carolina	17	13	12
Shaw University (colored), North Carolina	29	23	14
Weaver College, North Carolina	8	14	4
Salem Academy and College, North Carolina	35	18	1
University of North Dakota	55	12	18
Municipal University of Akron, Ohio	21	18	7
Ohio University	36		6
Baldwin-Wallace College, Ohio	19	16	8
Bluffton College, Ohio	16	14	4
Cedarville College, Ohio	7	16	7
University of Cincinnati, Ohio	236	12	2
Western Reserve University, Ohio	79	10	1
Capital University, Ohio	14	12	2
St. Mary College, Ohio	16	17	0
Defiance College, Ohio	16	14	4
Ohio Wesleyan University	59	12	7
Kenyon College, Ohio	14	14	0
Marietta College, Ohio	18	12	0
Muskingum College, Ohio	38		10
Miami University, Ohio	31	12	
Oxford College for Women, Ohio	19	7	4
Western College for Women, Ohio	32	11	0
Lake Erie College, Ohio	21	12	1
Rio Grande College, Ohio	10		6
Otterbein University, Ohio	17	16	
College of Wooster, Ohio	32	14	12
Methodist University of Oklahoma	9	22	8
Kingfisher College, Oklahoma	9	19	5
University of Oklahoma	63	14	4
Albany College, Oregon	13	12	2
Pacific University, Oregon	20	13	3
McMinnville College, Oregon	16	22	10
Pacific College, Oregon	10	20	3
Reed College, Oregon	19		
Willamette University, Oregon	13	14	3
Moravian College, Pennsylvania	8	20	5
Bryn Mawr College, Pennsylvania	43		0
Beaver College, Pennsylvania	8	2	3
Wilson College, Pennsylvania	24	11	0
Lafayette College, Pennsylvania	50	12	0
Pennsylvania College	26	16	10
Haverford College, Pennsylvania	25	11	2
Franklin and Marshall College, Pennsylvania	16	15	10
Lincoln University (colored), Pennsylvania	13	12	0
Allegheny College, Pennsylvania	25	11	0
Irving Female College, Pennsylvania	19	18	2
Albright College, Pennsylvania	10	13	5
Westminster College, Pennsylvania	20	15	0
Drexel Institute, Pennsylvania	69		1
University of Pennsylvania	154		1
Susquehanna University, Pennsylvania	23	18	23
Pennsylvania State College	93		
Swarthmore College, Pennsylvania	39	11	1
Washington and Jefferson College, Pennsylvania	32	10	1
Waynesburg College, Pennsylvania	11	18	10
College of Charleston, South Carolina	8	13	0
Columbia College, South Carolina	21	16	10
University of South Carolina	32	14	12
Furman University, South Carolina	11	15	0
Converse College, South Carolina	13	0	2
Wofford College, South Carolina	13	15	4

TABLE 8.—*Faculty—Number of teaching hours, 1915–16*—Continued.

Institutions.	Faculty.	Average number of teaching hours per week for those having independent charge of classes.	Number teaching more than 15 credit hours a week.
University of South Dakota	36	12	0
King College, Tennessee	8	.....	5
University of Chattanooga, Tennessee	9	15	2
Tusculum College, Tennessee	11	10	1
Knoxville College (colored), Tennessee	8	18	7
Milligan College, Tennessee	10	16	0
Tennessee College	6	16	4
George Peabody College for Teachers, Tennessee	100	18	0
Fisk University (colored), Tennessee	32	.....	9
Vanderbilt University, Tennessee	35	15	0
University of the South, Tennessee	18	12	3
University of Texas	117	.....	.....
Howard Payne College, Texas	7	13	0
Rice Institute, Texas	41	.....	.....
Austin College, Texas	10	14	2
Baylor University, Texas	66	15	0
University of Utah	37	.....	12
Middlebury College, Vermont	30	12	1
St. Michael's College, Vermont	11	16	3
Bridgewater College, Virginia	13	15	0
University of Virginia	59	.....	6
Roanoke Institute, Virginia	8	14	8
Emory and Henry College, Virginia	10	15	0
Hampden-Sidney College, Virginia	12	11	.....
Hollins College, Virginia	12	12	2
Washington and Lee University, Virginia	28	10	0
Randolph-Macon Woman's College, Virginia	46	14	1
Richmond College, Virginia	29	14	1
Virginia Union University (colored)	12	16	.....
College of William and Mary, Virginia	15	13	2
University of Washington	124	11	17
Spokane College, Washington	6	30	6
Davis and Elkins College, West Virginia	29	16	7
Lawrence College, Wisconsin	35	14	0
Beloit College, Wisconsin	41	.....	6
University of Wisconsin	283	10	4
Milton College, Wisconsin	14	15	6
Concordia College, Wisconsin	9	26	7
Milwaukee-Downer College, Wisconsin	35	15	5
Mission House, Wisconsin	9	25	9
Campion College, Wisconsin	15	11	.....
Ripon College, Wisconsin	25	.....	.....
St. Clair College and Academy, Wisconsin	14	14	.....

REQUIREMENTS FOR ADMISSION AND GRADUATION.

Requirements VIII and IX.—VIII. Fifteen or sixteen credit hours a week for each student for 36 weeks a year for four years should be regarded as the normal program of work for students.

IX. While heretofore 14 units of secondary work has been regarded as the acceptable minimum for admission to college, and at the time of the issuance of this inquiry represented the standard set by most standardizing agencies, there is now a general tendency to raise this requirement to 15 units. A college of arts and sciences should require 15 units for unconditional admission. In judging the reports of colleges appearing in this study, however, the prevailing standard of 1915 should be taken into account.

TABLE 9.—*Requirements for admission and graduation, 1915–16.*

Institutions.	Number of standard units required for admission.	Number of semester hours required for bachelor's degree.
University of Alabama	14	120
University of Arizona	15	127
Central College, Arkansas	14	65
Hendrix College, Arkansas	15	120
Pomona College, California	15	126
Occidental College, California	15	124
Mills College, California	15	124
University of Redlands, California	15	120
University of Santa Clara, California	16	178
Leland Stanford Junior University, California	15	120
University of Colorado	15	122
Colorado College	15	120
University of Denver, Colorado	15	124
Trinity College, Connecticut	14½	120
Yale University, Connecticut	14½	120
Gallaudet College, District of Columbia	11	139
George Washington University, District of Columbia	15	120
Howard University (colored), District of Columbia	15	120
University of Florida	15	124
Columbia College, Florida	15	128
Florida State College for Women	15	120
University of Georgia	14	132
Atlanta University (colored), Georgia	15	136
Cox College, Georgia	14	120
North Georgia Agricultural College	14	.....
Agnes Scott College, Georgia	15	120
Piedmont College, Georgia	15	124
Bessie Tift College, Georgia	14	120
Brenau College, Georgia	15	120
Emory University, Georgia	14	134
Shorter College, Georgia	15	120
University of Idaho	15	128
Aurora College, Illinois	15	120
Illinois Wesleyan University	15	128
Blackburn College, Illinois	15	128
De Paul University, Illinois	15	130
Loyola University, Illinois	16	140
James Millikin University, Illinois	15	130
Knox College, Illinois	15	120
Illinois Woman's College	15	120
Lake Forest College, Illinois	16	124
Frances Shimer School, Illinois	15	(1)
Northwestern College, Illinois	15	128
Rockford College, Illinois	15	120
Augustana College, Illinois	15	120
Indiana University	16	121
Wabash College, Indiana	16	128
Earlham College, Indiana	15	120
Franklin College, Indiana	16	126
De Pauw University, Indiana	15	120
Butler College, Indiana	15	120
University of Notre Dame, Indiana	16	128
Taylor University, Indiana	15	186
Iowa State Teachers College	15	120
Coe College, Iowa	15	124
Wartburg College, Iowa	15	.....
Des Moines College, Iowa	15	120
Drake University, Iowa	15	120
Parsons College, Iowa	15	120
State University of Iowa	15	120
Cornell College, Iowa	15	124
Central University of Iowa	15	128
Morningside College, Iowa	15	120
Buena Vista College, Iowa	15	120
Midland College, Kansas	15	120
College of Emporia, Kansas	15	120
Ottawa University, Kansas	15	120
Kansas Wesleyan University	15	120
Cooper College, Kansas	15	122
Washburn College, Kansas	15	120
Southwestern College, Kansas	15	120
Ogden College, Kentucky	15	120
Centre College, Kentucky	15	128
Georgetown College, Kentucky	15	128
University of Kentucky	15	120
Transylvania College, Kentucky	15	120
University of Louisville, Kentucky	16	130
Bethel College, Kentucky	15	130
H. Sophie Newcomb Memorial College, Kentucky	15	122
Loyola University, Louisiana	15	144
Bowdoin College, Maine	14½	117
Bates College, Maine	14½	122
University of Maine	14½	125

[1] Junior college.

TABLE 9.—*Requirements for admission and graduation, 1915–16*—Continued.

Institutions.	Number of standard units required for admission.	Number of semester hours required for bachelor's degree.
St. John's College, Maryland	14	144
Goucher College, Maryland	15	120
Johns Hopkins University, Maryland	15	125
Morgan College (colored), Maryland	16	128
Washington College, Maryland	14	124
Rock Hill College, Maryland	14	.....
Hood College, Maryland	15	120
Maryland College for Women	13½	.....
Amherst College, Massachusetts	14	129
Boston University, Massachusetts	15	120
Harvard University, Massachusetts	16½	.....
Smith College, Massachusetts	14½	120
Wheaton College, Massachusetts	15	118
Mount Holyoke College, Massachusetts	15	120
Tufts College, Massachusetts	15	122
Clark College, Massachusetts	15	108
Alma College, Michigan	15	120
University of Michigan	15	120
St. John's University, Minnesota	16	128
Augsburg Seminary, Minnesota	15	144
Carleton College, Minnesota	15	120
Hamline University, Minnesota	15	120
Macalester College, Minnesota	15	127
College of St. Catherine, Minnesota	15	120
Gustavus Adolphus College, Minnesota	15	130
College of St. Teresa, Minnesota	16	120
Mississippi College	14	128
Meridian College, Mississippi	14	120
University of Mississippi	14	130
Stephens College, Missouri	15	(1)
Westminster College, Missouri	15	132
William Jewell College, Missouri	15	124
Park College, Missouri	15	140
Lindenwood Female College, Missouri	15	(1)
Forest Park College, Missouri	15	120
St. Louis University, Missouri	16	136
Washington University, Missouri	15	120
Drury College, Missouri	15	124
Central Wesleyan College, Missouri	16	128
University of Montana	15	122
Bellevue College, Nebraska	15	128
Union College, Nebraska	16	160
Doane College, Nebraska	15	124
University of Nebraska	15	125
New Hampshire College of Agriculture and Mechanic Arts	15	132
College of St. Elizabeth, New Jersey	15	132
Upsala College, New Jersey	15	125
University of New Mexico	15	120
New York State College for Teachers	15	124
Alfred University, New York	15	128
St. Stephen's College, New York	14½	128
Wells College, New York	14½	115
St. Lawrence University, New York	15	120
Elmira College, New York	15	120
Hobart College, New York	14½	120
College of New Rochelle, New York	16	144
Barnard College, New York	15	124
Columbia University, New York	14½	124
College of the City of New York	15	128
Hunter College of the City of New York	15	120
New York University	15	126
Vassar College, New York	15½	120
University of Rochester, New York	15	184
Union University, New York	14	138
University of North Carolina	14	120
Davidson College, North Carolina	14	130
Trinity College, North Carolina	14	122
Elon College, North Carolina	14	128
Guilford College, North Carolina	14	126
Shaw University (colored) North Carolina	15	.....
Weaver College, North Carolina	14	(1)
Salem Academy and College, North Carolina	14	120
University of North Dakota	15	125
Municipal University of Akron, Ohio	15	128
Ohio University	15	120
Baldwin-Wallace College, Ohio	15	120
Bluffton College, Ohio	15	120
Cedarville College, Ohio	16	120
University of Cincinnati, Ohio	16	124
Western Reserve University, Ohio	15	124
Capital University, Ohio	15	140
St. Mary College, Ohio	15	120
Defiance College, Ohio	15	120
Ohio Wesleyan University	15	120
Kenyon College, Ohio	15	128
Marietta College, Ohio	15	128
Muskingum College, Ohio	15	128
Miami University, Ohio	15	128
Oxford College for Women, Ohio	15	120
Western College for Women, Ohio	15	124
Lake Erie College, Ohio	15	120
Rio Grande College, Ohio	15	120
Otterbein University, Ohio	15	128
College of Wooster, Ohio	15	124
Methodist University of Oklahoma	15	120
Kingfisher College, Oklahoma	15	128
University of Oklahoma	15	124
Albany College, Oregon	15	120
Pacific University, Oregon	15	120
McMinnville College, Oregon	15	160
Pacific College, Oregon	15	185
Reed College, Oregon	15	.....
Willamette University, Oregon	15	124
Moravian College, Pennsylvania	17½	120
Bryn Mawr College, Pennsylvania	20	120
Beaver College, Pennsylvania	15	120
Wilson College, Pennsylvania	14½	120
Lafayette College, Pennsylvania	14½	130
Pennsylvania College	15	128
Haveford College, Pennsylvania	14½	130
Franklin and Marshall College, Pennsylvania	14½	130
Lincoln University (colored), Pennsylvania	15	120
Allegheny College, Pennsylvania	15	120
Irving Female College, Pennsylvania	13	140
Albright College, Pennsylvania	16	134
Westminster College, Pennsylvania	15	120
Drexel Institute, Pennsylvania	14½	...
University of Pennsylvania	15	128
Susquehanna University, Pennsylvania	14	120
Pennsylvania State College	14	136
Swarthmore College, Pennsylvania	14½	124
Washington and Jefferson College, Pennsylvania	14½	124

[1] Junior college.

TABLE 9.—*Requirements for admission and graduation, 1915–16*—Continued.

Institutions.	Number of standard units required for admission.	Number of semester hours required for bachelor's degree.
Waynesburg College, Pennsylvania	15	136
College of Charleston, South Carolina	14	122
Columbia College, South Carolina	14	.....
University of South Carolina	11	138
Furman University, South Carolina	12	130
Converse College, South Carolina	14½	120
Wofford College, South Carolina	14	132
University of South Dakota	15	128
King College, Tennessee	14	124
University of Chattanooga, Tennessee	14½	120
Tusculum College, Tennessee	15	128
Knoxville College (colored), Tennessee	15	125
Milligan College, Tennessee	15	128
Tennessee College	14	120
George Peabody College for Teachers, Tennessee	14	186
Fisk University (colored), Tennessee	15	140
Vanderbilt University, Tennessee	14	128
University of the South, Tennessee	14	140
University of Texas	14	120
Howard Payne College, Texas	14	120
Rice Institute, Texas	14	.....
Austin College, Texas	14	122
Baylor University, Texas	14	120
University of Utah	15	122
Middlebury College, Vermont	14	120
St. Michael's College, Vermont	15	104
Bridgewater College, Virginia	14	140
University of Virginia	14	120
Roanoke Institute, Virginia	15	(1)
Emory and Henry College, Virginia	14	128
Hampden-Sidney College, Virginia	14	120
Hollins College, Virginia	14	120
Washington and Lee University, Virginia	14	126
Randolph-Macon Woman's College, Virginia	15	120
Richmond College, Virginia	15	120
Virginia Union College (colored)	15	160
College of William and Mary, Virginia	14	120
University of Washington	15	120
Spokane College, Washington	16	(1)
Davis and Elkins College, West Virginia	14	128
Lawrence College, Wisconsin	15	128
Beloit College, Wisconsin	15	120
University of Wisconsin	14	120
Milton College, Wisconsin	15	128
Concordia College, Wisconsin	.....	(1)
Milwaukee-Downer College, Wisconsin	15	201
Mission House, Wisconsin	15	150
Campion College, Wisconsin	16	142
Ripon College, Wisconsin	15	124
St. Clara College and Academy, Wisconsin	15	120

[1] Junior college.

MAINTENANCE OF LIBRARY AND LABORATORIES.

Suggested Requirement XIII.—At least $1,000 a year should be expended for the purchase of new books and periodicals for the library. Probably two or three times this figure would be needed to keep the library in a sound condition. A similar sum should be appropriated annually for the purchase of new equipment and apparatus for scientific laboratories.

TABLE 10.—*Expenditures for library and laboratories, 1914–15.*

Institutions.	Spent on laboratories.	Spent on library.
University of Alabama	$5,670	$3,318
University of Arizona	44,000	4,820
Central College, Arkansas	100	550
Hendrix College, Arkansas	813	628
Pomona College, California	4,594	4,885
Occidental College, California	800	475
Mills College, California	1,885	3,536
University of Redlands, California	466	836
University of Santa Clara, California	.....	.....
Leland Stanford Junior University, California	13,887	57,300
University of Colorado	30,000	20,800
Colorado College	$4,510	$5,489
University of Denver, Colorado	.....	.....
Trinity College, Connecticut	1,365	3,520
Yale University, Connecticut	114,000	88,000
Gallaudet College, District of Columbia	.....	.....
George Washington University, District of Columbia	2,815	1,273
Howard University (colored), District of Columbia	2,732	4,807
University of Florida	1,480	3,469
Columbia College, Florida	.....	.....
Florida State College for Women	3,000	4,800

TABLE 10.—*Expenditures for library and laboratories, 1914–15*—Continued.

Institutions.	Spent on laboratories.	Spent on library.
University of Georgia	$2,458	$7,982
Atlanta University (colored), Georgia	335	1,379
Cox College, Georgia	700	500
North Georgia Agricultural College	500	.....
Agnes Scott College, Georgia	968	1,296
Piedmont College, Georgia	600	700
Bessie Tift College, Georgia	200	800
Brenau College, Georgia	.....	.....
Emory University, Georgia	1,240	1,233
Shorter College, Georgia	.....	.....
University of Idaho	10,326	7,708
Aurora College, Illinois	.....	.....
Illinois Wesleyan University	2,500	1,600
Blackburn College, Illinois	500	300
DePaul University, Illinois	305	200
Loyola University, Illinois	.....	2,300
James Millikin University, Illinois	1,360	443
Knox College, Illinois	8,480	1,489
Illinois Woman's College	2,700	2,600
Lake Forest College, Illinois	6,366	5,625
Frances Shimer School, Illinois	200	225
Northwestern College, Illinois	710	1,066
Rockford College, Illinois	2,308	1,600
Augustana College, Illinois	652	4,321
Indiana University	11,206	29,105
Wabash College, Indiana	2,346	2,153
Earlham College, Indiana	5,500	3,809
Franklin College, Indiana	2,364	1,625
De Pauw University, Indiana	3,003	5,739
Butler College, Indiana	1,284	1,337
University of Notre Dame, Indiana	16,300	1,600
Taylor University, Indiana	532	350
Iowa State Teachers College	5,369	13,500
Coe College, Iowa	1,826	2,314
Wartburg College, Iowa	.....	.....
Des Moines College, Iowa	3,500	2,100
Drake University, Iowa	8,060	5,500
Parsons College, Iowa	1,396	1,418
State University of Iowa	42,034	28,340
Cornell College, Iowa	2,934	4,500
Central University of Iowa	398	200
Morningside College, Iowa	2,785	2,550
Buena Vista College, Iowa	438	510
Midland College, Kansas	700	1,200
College of Emporia, Kansas	6,800	2,061
Ottawa University, Kansas	1,033	1,500
Kansas Wesleyan University	800	700
Cooper College, Kansas	500	465
Washburn College, Kansas	1,747	1,950
Southwestern College, Kansas	.....	.....
Ogden College, Kentucky	800	300
Centre College, Kentucky	2,800	1,000
Georgetown College, Kentucky	450	500
University of Kentucky	.....	.....
Transylvania College, Kentucky	547	876
University of Louisville, Kentucky	2,656	1,405
Bethel College, Kentucky	122	40
H. Sophie Newcomb Memorial College, Louisiana	2,104	3,242
Loyola University, Louisiana	.....	.....
Bowdoin College, Maine	3,696	15,303
Bates College, Maine	1,708	2,635
University of Maine	18,400	6,310
St. Johns College, Maryland	2,092	500
Goucher College, Maryland	5,060	2,897
Johns Hopkins University, Maryland	161,402	25,236
Morgan College (colored), Maryland	260	415
Washington College, Maryland	600	600
Rock Hill College, Maryland	1,600	500
Hood College, Maryland	2,867	895
Maryland College for Women	1,096	936
Amherst College, Massachusetts	.....	.....
Boston University, Massachusetts	471	1,455
Harvard University, Massachusetts	.....	.....
Smith College, Massachusetts	$10,024	$17,858
Wheaton College, Massachusetts	2,565	1,160
Mount Holyoke College, Massachusetts	5,636	6,561
Tufts College, Massachusetts	.....	.....
Clark College, Massachusetts	4,300	26,600
Alma College, Michigan	1,265	1,045
University of Michigan	95,520	58,539
St. Johns University, Minnesota	.....	.....
Augsbury Seminary, Minnesota	200	216
Carleton College, Minnesota	3,825	3,282
Hamline University, Minnesota	2,750	3,000
Macalester College, Minnesota	1,944	2,911
College of St. Catherine, Minnesota	2,740	3,000
Gustavus Adolphus College, Minnesota	700	955
College of St. Teresa, Minnesota	.....	.....
Mississippi College	.....	.....
Meridian College, Mississippi	.....	.....
University of Mississippi	18,000	6,000
Stephens College, Missouri	695	1,160
Westminster College, Missouri	617	622
William Jewell College, Missouri	2,230	1,974
Park College, Missouri	910	1,527
Lindenwood College, Missouri	533	550
Forest Park College, Missouri	.....	.....
St. Louis University, Missouri	.....	.....
Washington University, Missouri	136,847	20,487
Drury College, Missouri	2,300	900
Central Wesleyan College, Missouri	700	350
University of Montana	10,355	12,669
Bellevue College, Nebraska	550	700
Union College, Nebraska	295	1,016
Doane College, Nebraska	600	827
University of Nebraska	37,000	28,320
New Hampshire College of Agriculture and Mechanic Arts	1,470	3,400
College of St. Elizabeth, New Jersey	280	650
Upsala College, New Jersey	211	87
University of New Mexico	2,750	3,700
New York State College for Teachers	9,600	2,300
Alfred University, New York	4,063	1,952
St. Stephens College, New York	500	750
Wells College, New York	1,218	7,253
St. Lawrence University, New York	.....	1,537
Elmira College, New York	1,096	800
Hobart College, New York	3,000	4,200
College of New Rochelle, New York	.....	.....
Barnard College, New York	4,150	2,421
Columbia University, New York	60,444	94,221
College of the City of New York	26,064	3,757
Hunter College of the City of New York	3,872	8,570
New York University	6,470	4,040
Vassar College, New York	2,810	15,352
University of Rochester, New York	4,295	5,958
Union University, New York	7,282	4,351
University of North Carolina	10,582	9,615
Davidson College, North Carolina	1,525	1,700
Trinity College, North Carolina	1,443	2,148
Elon College, North Carolina	1,087	1,537
Guilford College, North Carolina	500	850
Shaw University (colored), North Carolina	.....	.....
Weaver College, North Carolina	.....	.....
Salem Academy and College, North Carolina	2,885	1,191
University of North Dakota	7,288	9,551
Municipal University of Akron, Ohio	6,851	3,434
Ohio University	8,050	8,000

TABLE 10.—*Expenditures for library and laboratories, 1914–15*—Continued.

Institutions.	Spent on laboratories.	Spent on library.
Baldwin-Wallace College, Ohio	$5,192	$784
Bluffton College, Ohio		1,200
Cedarville College, Ohio	415	1,000
University of Cincinnati, Ohio	21,136	8,711
Western Reserve University, Ohio	4,045	8,679
Capital University, Ohio	700	257
St. Mary College, Ohio		
Defiance College, Ohio	1,066	467
Ohio Wesleyan University	4,538	7,646
Kenyon College, Ohio	1,697	1,209
Marietta College, Ohio	1,168	2,143
Muskingum College, Ohio	400	1,329
Miami University, Ohio		5,496
Oxford College for Women, Ohio	405	1,977
Western College for Women, Ohio	1,437	2,665
Lake Erie College, Ohio	503	2,734
Rio Grande College, Ohio	400	250
Otterbein University, Ohio	654	2,305
College of Wooster, Ohio	3,686	3,148
Methodist University of Oklahoma	380	100
Kingfisher College, Oklahoma	100	540
University of Oklahoma	17,006	7,406
Albany College, Oregon	613	1,039
Pacific University, Oregon	615	2,000
McMinnville College, Oregon	1,203	852
Pacific College, Oregon	300	550
Reed College, Oregon	3,600	5,800
Willamette University, Oregon	1,890	535
Moravian College, Pennsylvania	685	250
Bryn Mawr College, Pennsylvania	11,881	21,010
Beaver College, Pennsylvania		
Wilson College, Pennsylvania	261	1,140
Lafayette College, Pennsylvania	10,100	6,443
Pennsylvania College	5,682	1,300
Haverford College, Pennsylvania	3,800	7,700
Franklin and Marshall College, Pennsylvania	2,800	1,200
Lincoln University (colored), Pennsylvania	500	400
Allegheny College, Pennsylvania	8,231	2,339
Irving Female College, Pennsylvania		
Albright College, Pennsylvania	1,572	861
Westminster College, Pennsylvania	3,121	1,919
Drexel Institute, Pennsylvania		
University of Pennsylvania	5,282	54,323
Susquehanna University, Pennsylvania	2,400	2,000
Pennsylvania State College	46,900	4,695
Swarthmore College, Pennsylvania	6,316	4,670
Washington and Jefferson College, Pennsylvania	2,887	2,602
Waynesburg College, Pennsylvania		600
College of Charleston, South Carolina	718	225
Columbia College, South Carolina		
University of South Carolina	2,530	6,139
Furman University, South Carolina		
Converse College, South Carolina	$461	$1,055
Wofford College, South Carolina	598	1,050
University of South Dakota	5,960	8,000
King College, Tennessee		
University of Chattanooga, Tennessee	500	1,650
Tusculum College, Tennessee	1,709	625
Knoxville College (colored), Tennessee		
Milligan College, Tennessee	560	450
Tennessee College	390	1,025
George Peabody College for Teachers, Tennessee	13,778	4,000
Fisk University (colored), Tennessee	530	958
Vanderbilt University, Tennessee	13,300	5,200
University of the South, Tennessee	1,641	1,071
University of Texas	15,400	32,909
Howard Payne College, Texas	3,000	3,000
Rice Institute, Texas	37,481	8,685
Austin College, Texas	1,500	600
Baylor University, Texas	2,884	4,022
University of Utah	37,000	8,410
Middlebury College, Vermont	2,463	3,942
St. Michael's College, Vermont		
Bridgewater College, Virginia	490	375
University of Virginia	13,915	9,973
Roanoke Institute, Virginia		
Emory and Henry College, Virginia		
Hampden-Sidney College, Virginia	683	511
Hollins College, Virginia	500	1,500
Washington and Lee University, Virginia	1,204	3,104
Randolph-Macon Woman's College, Virginia	4,971	3,834
Richmond College, Virginia	2,172	2,180
Virginia Union University (colored)	250	600
College of William and Mary, Virginia	853	1,285
University of Washington	62,999	17,677
Spokane College, Washington	309	262
Davis and Elkins College, West Virginia	200	150
Lawrence College, Wisconsin	2,386	4,767
Beloit College, Wisconsin	1,996	3,719
University of Wisconsin	39,096	55,933
Milton College, Wisconsin	1,077	968
Concordia College, Wisconsin	50	225
Milwaukee-Downer College, Wisconsin	970	1,292
Mission House, Wisconsin		
Campion College, Wisconsin		
Ripon College, Wisconsin	1,343	2,508
St. Clara College and Academy, Wisconsin	1,525	575

RELATIVE SIZE OF FRESHMAN CLASS.

The large number of students who leave college during the freshman and sophomore years, and the small relative size of the upper classes, have constituted a serious educational and administrative problem for many years. In certain institutions 50 per cent or more of all students are members of the freshman class. It is generally admitted that this condition is detrimental to institutional tradition,

and may affect the scholarly momentum of a college. The status with respect to this matter of the colleges reporting is indicated in the following table, showing the number of high-school graduates entering in 1915 checked against the total collegiate student body:

TABLE 11.—*Faculty, college students, and number of high school graduates entering in 1915.*

Institutions.	Faculty.	Students.			Number of high school graduates entering in 1915.		
		Men.	Women.	Total.	Men.	Women.	Total.
University of Alabama	24	406	88	494	109	16	125
University of Arizona	28	209	141	350	65	35	100
Central College, Arkansas	18	0	55	55	0	16	16
Hendrix College, Arkansas	13	244	25	269	.....	.....	.....
Pomona College, California	45	241	299	540	109	120	229
Occidental College, California	22	195	138	333	69	60	129
Mills College, California	34	0	187	187	.....	.....	.....
University of Redlands, California	20	58	119	177	30	0	30
University of Santa Clara, California	8	93	0	93	19	0	19
Leland Stanford Junior University, California	145	1,644	556	2,200	.....	.....	471
University of Colorado	76	402	448	850	188	170	358
Colorado College	35	173	354	527	67	125	192
University of Denver, Colorado	31	270	310	580	115	133	248
Trinity College, Connecticut	25	235	0	235	85	0	85
Yale University, Connecticut	104	1,483	0	1,483	320	0	320
Gallaudet College, District of Columbia	16	48	30	78	15	11	26
George Washington University, District of Columbia	38	476	263	739	96	48	144
Howard University (colored), District of Columbia	25	262	71	333	84	16	100
University of Florida	17	96	0	96	51	0	51
Columbia College, Florida	20	46	47	93	5	2	7
Florida State College for Women	21	0	153	153	0	74	74
University of Georgia	31	278	0	278	75	0	75
Atlanta University (colored), Georgia	17	39	16	55	2	2	4
Cox College, Georgia	11	0	102	102	.....	.....	.....
North Georgia Agricultural College	14	83	1	84	7	1	8
Agnes Scott College, Georgia	28	0	299	299	0	132	132
Piedmont College, Georgia	16	22	23	45	.....	.....	.....
Bessie Tift College, Georgia	25	0	166	166	0	70	70
Brenau College, Georgia	16	0	198	198	0	19	19
Emory University, Georgia	16	244	0	244	70	0	70
Shorter College, Georgia	12	0	160	160	.....	.....	.....
University of Idaho	40	134	223	357	58	67	125
Aurora College, Illinois	12	39	32	71	.....	.....	.....
Illinois Wesleyan University	18	124	119	243	.....	.....	.....
Blackburn College, Illinois	12	45	27	72	.....	.....	.....
De Paul University, Illinois	20	36	324	360	23	165	188
Loyola University, Illinois	18	121	0	121	111	0	111
James Millikin University, Illinois	39	131	205	336	65	93	158
Knox College, Illinois	26	233	208	441	116	93	209
Illinois Woman's College	16	0	176	176	0	85	85
Lake Forest College, Illinois	20	102	92	194	38	41	79
Frances Shimer School, Illinois	18	0	33	33	0	15	15
Northwestern College, Illinois	12	160	91	251	60	49	109
Rockford, College, Illinois	28	0	217	217	0	110	110
Augustana College, Illinois	14	136	61	197	77	30	107
Indiana University	233	1,701	968	2,669	.....	.....	.....
Wabash College, Indiana	21	334	0	334	119	0	119
Earlham College, Indiana	34	170	202	372	7	4	11
Franklin College, Indiana	18	123	131	254	55	58	113
De Pauw University, Indiana	37	367	378	745	127	120	247
Butler College, Indiana	20	168	249	417	71	94	165
University of Notre Dame, Indiana	80	274	0	274	250	0	250
Taylor University, Indiana	26	65	49	114	28	15	43
Iowa State Teachers College	98	240	1,579	1,819	.....	.....	.....
Coe College, Iowa	43	230	257	487	100	100	200
Wartburg College, Iowa	9	28	0	28	.....	.....	.....
Des Moines College, Iowa	12	96	129	225	30	44	74
Drake University, Iowa	31	260	229	489	81	42	123
Parsons College, Iowa	12	81	74	155	42	24	66
State University of Iowa	148	812	765	1,577	316	300	616
Cornell College, Iowa	31	234	310	544	98	106	204
Central University of Iowa	17	29	31	60	8	12	20
Morningside College, Iowa	19	155	221	376	65	90	155
Buena Vista College, Iowa	10	29	36	65	9	13	22

TABLE 11.—*Faculty, college students, and number of high school graduates entering in 1915*—Continued.

Institutions.	Faculty.	Students.			Number of high school graduates entering in 1915.		
		Men.	Women.	Total.	Men.	Women.	Total.
Midland College, Kansas	18	45	55	100	15	12	27
College of Emporia, Kansas	18	120	123	243	53	57	110
Ottawa University, Kansas	11	94	110	204	43	38	81
Kansas Wesleyan University	23	84	90	174	31	47	78
Cooper College, Kansas	10	57	59	116	15	15	30
Washburn College, Kansas	24	196	225	421	73	88	161
Southwestern College, Kansas	24	152	124	276			
Ogden College, Kentucky	8	50	0	50	15	0	15
Centre College, Kentucky	12	147	0	147			
Georgetown College, Kentucky	26	157	109	266			91
University of Kentucky	28	162	156	318			
Transylvania College, Kentucky	26	163	88	251	62	41	103
University of Louisville, Kentucky	24	129	216	345	62	69	131
Bethel College, Kentucky	6	30	0	30	16	0	16
H. Sophie Newcomb Memorial College, Louisiana	29	0	273	273	0	107	107
Loyola University, Louisiana	10	45	0	45	21	0	21
Bowdoin College, Maine	28	400	0	400	123	0	123
Bates College, Maine	28	284	188	472	102	58	160
University of Maine	56	185	81	266	57	23	80
St. John's College, Maryland	13	100	0	100	24	0	24
Goucher College, Maryland	35	0	508	508	0	204	204
Johns Hopkins University, Maryland	49	195	0	195			
Morgan College (colored), Maryland	8	27	22	49	2	5	7
Washington College, Maryland	9	82	7	89	32	3	35
Rock Hill College, Maryland	15	40	0	40	18	0	18
Hood College, Maryland	15	0	128	128			
Maryland College for Women	11	0	89	89	0	38	38
Amherst College, Massachusetts	47	422	0	422			
Boston University, Massachusetts	29	104	348	452	62	169	231
Harvard University, Massachusetts							
Smith College, Massachusetts	130	0	1,725	1,725			
Wheaton College, Massachusetts	27	0	206	206			
Mount Holyoke College, Massachusetts	88	0	783	783	0	229	229
Tufts College, Massachusetts	33	216	0	216	75	0	75
Clark College, Massachusetts	28	177	0	177			
Alma College, Michigan	19	88	90	178	30	32	62
University of Michigan	266	298	1,127	1,425			
St. John's University, Minnesota	18	200	0	200			
Augsburg Seminary, Minnesota	18	31	0	31	4	0	4
Carleton College, Minnesota	35	211	235	446	81	85	166
Hamline University, Minnesota	18	224	194	418	108	85	193
Macalester College, Minnesota	22	159	137	296	60	63	123
College of St. Catherine, Minnesota	35	0	141	141	0	75	75
Gustavus Adolphus College, Minnesota	15	102	64	166	28	24	52
College of St. Teresa, Minnesota	41	0	104	104			
Mississippi College	12	324	0	324			
Meridian College, Mississippi	17	104	278	382			
University of Mississippi	20	547	84	631			
Stephens College, Missouri	16	0	145	145	0	74	74
Westminister College, Missouri	13	119	0	119	49	0	49
William Jewell College, Missouri	16	279	0	279			
Park College, Missouri	19	119	142	261	55	56	111
Lindenwood College, Missouri	12	0	86	86	0	60	60
Forest Park College, Missouri	24	0	30	30			
St. Louis University, Missouri	26	223	0	223	0	27	27
Washington University, Missouri	70	232	309	541	89	113	202
Drury College, Missouri	15	140	147	287	66	63	129
Central Wesleyan College, Missouri	23	60	35	95	18	15	33
University of Montana	40	149	238	387	61	83	144
Bellevue College, Nebraska	14	30	37	67	29	33	62
Union College, Nebraska	26	64	51	115	36	39	75
Doane College, Nebraska	18	70	63	133	31	27	58
University of Nebraska	95	940	926	1,866	371	292	664
New Hampshire College of Agriculture and Mechanic Arts	31	123	113	236	36	45	81
College of St. Elizabeth, New Jersey	34	0	110	110	0	42	42
Upsala College, New Jersey	12	8	6	14	2	2	4
University of New Mexico	20	81	66	147	33	24	57
New York State College for Teachers	52	164	855	1,019	55	260	315
Alfred University, New York	28	76	83	159	27	27	54
St. Stephen's College, New York	9	52	0	52	5	0	5
Wells College, New York	31	0	202	202	0	78	78
St. Lawrence University, New York	16	132	137	269	45	29	74
Elmira College, New York	32	0	278	278	0	93	93

TABLE 11.—*Faculty, college students, and number of high school graduates entering in 1915*—Continued.

Institutions.	Faculty.	Students.			Number of high school graduates entering in 1915.		
		Men.	Women.	Total.	Men.	Women.	Total.
Hobart College, New York	26	138	98	236	57	30	87
College of New Rochelle, New York	22	0	193	193	0	60	60
Barnard College, New York	88	0	694	694	0	190	190
Columbia University, New York	133	1,256	0	1,256	357	0	357
College of the City of New York	142	2,229	0	2,229	546	0	546
Hunter College of the City of New York	118	0	1,943	1,943	0	405	405
New York University	47	278	0	278	62	0	62
Vassar College, New York	112	0	1,127	1,127	0	319	319
University of Rochester, New York	45	306	224	530	101	71	172
Union University, New York	40	521	0	521	175	0	175
University of North Carolina	52	544	5	549	146	0	146
Davidson College, North Carolina	13	357	0	357			
Trinity College, North Carolina	28	428	89	517			
Elon College, North Carolina	27	199	102	301	85	51	136
Guilford College, North Carolina	17	84	51	135	25	14	39
Shaw University (colored), North Carolina	29	88	110	198	3	0	3
Weaver College, North Carolina	8	27	6	33			
Salem Academy and College, North Carolina	35	0	189	189	0	48	48
University of North Dakota	55	166	116	282	78	40	118
Municipal University of Akron, Ohio	21	143	73	216	49	18	67
Ohio University	36	401	219	620	87	33	120
Baldwin-Wallace College, Ohio	19	136	108	244	35	39	74
Bluffton College, Ohio	16	52	64	116	21	31	52
Cedarville College, Ohio	7	35	33	68	8	10	18
University of Cincinnati, Ohio	236	501	880	1,381			
Western Reserve University, Ohio	79	408	435	843			
Capital University, Ohio	14	118	0	118	34	0	34
St. Mary College, Ohio	16	70	0	70	23	0	23
Defiance College, Ohio	16	99	116	215	30	45	75
Ohio Wesleyan University	59	545	464	1,009	148	143	291
Kenyon College, Ohio	14	151	0	151	52	0	52
Marietta College, Ohio	18	186	69	255	76	21	97
Muskingum College, Ohio	38	150	108	258	50	31	81
Miami University, Ohio	31	339	170	509			
Oxford College for Women, Ohio	19	0	188	188	0	60	60
Western College for Women, Ohio	32	0	263	263	0	103	103
Lake Erie College, Ohio	21	0	133	133	0	54	54
Rio Grande College, Ohio	10	30	25	55			
Otterbein University, Ohio	17	164	112	276	45	90	135
College of Wooster, Ohio	32	296	215	511	115	78	193
Methodist University of Oklahoma	9	36	28	64	14	6	20
Kingfisher College, Oklahoma	9	25	16	41	6	2	8
University of Oklahoma	63	797	776	1,573			
Albany College, Oregon	13	31	31	62	17	15	32
Pacific University, Oregon	20	54	53	107	17	22	39
McMinnville College, Oregon	16	50	39	89	18	15	33
Pacific College, Oregon	10	22	26	48	9	17	26
Reed College, Oregon	19	110	147	257			
Willamette University, Oregon	13	112	118	230	44	48	92
Moravian College, Pennsylvania	8	41	0	41	9	0	9
Bryn Mawr College, Pennsylvania	43	0	453	453			
Beaver College, Pennsylvania	8	0	50	50			
Wilson College, Pennsylvania	24	0	172	172	0	52	52
Lafayette College, Pennsylvania	50	477	0	477			
Pennsylvania College	26	317	14	331	112	2	114
Haverford College, Pennsylvania	25	186	0	186	51	0	51
Franklin and Marshall College, Pennsylvania	16	291	0	291	67	0	67
Lincoln University (colored), Pennsylvania	13	163	0	163	57	0	57
Allegheny College, Pennsylvania	25	241	164	405	84	54	138
Irving Female College, Pennsylvania	19	0	31	31			
Albright College, Pennsylvania	10	131	28	159	15	7	22
Westminster College, Pennsylvania	20	108	84	192	34	26	60
Drexel Institute, Pennsylvania	69	150	391	541	26	177	203
University of Pennsylvania	154	638	380	1,018			
Susquehanna University, Pennsylvania	23	128	28	156	37	5	42
Pennsylvania State College	93	332	42	374	231	12	243
Swarthmore College, Pennsylvania	39	127	237	364	46	70	116
Washington and Jefferson College, Pennsylvania	32	333	0	333			
Waynesburg College, Pennsylvania	11	49	55	104	17	17	34
College of Charleston, South Carolina	8	80	0	80	29	0	29
Columbia College, South Carolina	21	0	123	123	0	70	70

TABLE 11.—*Faculty, college students, and number of high school graduates entering in 1915*—Continued.

Institutions.	Faculty.	Students.			Number of high school graduates entering in 1915.		
		Men.	Women.	Total.	Men.	Women.	Total.
University of South Carolina	32	323	32	355	124	11	135
Furman University, South Carolina	11	205	0	205			
Converse College, South Carolina	13	0	153	153			
Wofford College, South Carolina	13	324	0	324	86	0	86
University of South Dakota	36	150	223	373	36	63	99
King College, Tennessee	8	60	0	60			
University of Chattanooga, Tennessee	9	108	77	185			
Tusculum College, Tennessee	11	45	48	93			
Knoxville College (colored), Tennessee	8	26	15	41	18	8	26
Milligan College, Tennessee	10	98	42	140	12	10	22
Tennessee College	6	0	94	94	0	48	48
George Peabody College for Teachers, Tennessee	100	413	1,099	1,512			
Fisk University (colored), Tennessee	32	95	84	179	18	14	32
Vanderbilt University, Tennessee	35	260	72	332	131	27	158
University of the South, Tennessee	18	160	0	160			
University of Texas	117	882	811	1,693	275	237	512
Howard Payne College, Texas	7	65	49	114	21	19	40
Rice Institute, Texas	41	264	119	383			
Austin College, Texas	10	108	0	108	36	0	36
Baylor University, Texas	66	243	268	511			
University of Utah	37	764	838	1,602			
Middlebury College, Vermont	30	187	156	343	67	50	117
St. Michael's College, Vermont	11	20	0	20	4	0	4
Bridgewater College, Virginia	13	42	30	72	8	11	19
University of Virginia	59	523	0	523	151	0	151
Roanoke Institute, Virginia	8	31	0	31	0	8	8
Emory and Henry College, Virginia	10	176	0	176			
Hampden-Sidney College, Virginia	10	118	0	118	38	0	38
Hollins College, Virginia	12	0	106	106	0	45	45
Washington and Lee University, Virginia	28	369	0	369	116	0	116
Randolph-Macon Woman's College, Virginia	46	0	624	624	0	241	241
Richmond College, Virginia	29	268	117	385	77	45	122
Virginia Union University (colored)	12	62	7	69	22	6	28
College of William and Mary, Virginia	15	178	0	178	50	0	50
University of Washington	124	813	1,042	1,855	243	364	607
Spokane College, Washington	6	2	8	10	2	6	8
Davis and Elkins College, West Virginia	29	34	22	56	10	10	20
Lawrence College, Wisconsin	35	294	270	564	131	121	252
Beloit College, Wisconsin	41	246	142	388	115	43	158
University of Wisconsin	283	1,692	1,109	2,801	507	320	827
Milton College, Wisconsin	14	33	39	72	14	15	29
Concordia College, Wisconsin	9	54	0	54			
Milwaukee-Downer College, Wisconsin	35	0	234	234	0	96	96
Mission-House, Wisconsin	9	38	1	39	4	0	4
Campion College, Wisconsin	15	80	0	80	18	0	18
Ripon College, Wisconsin	25	165	94	259			
St. Clara College and Academy, Wisconsin	14	0	69	69	0	30	30

EXPENSE OF ADMINISTRATION.

Uncertainty exists as to the proportion of the annual income which may properly be spent for administration. The committee does not venture to suggest a standard. It submits the following table, however, for the general information of college officers:

TABLE 12.—*Income and expenditures for administration, including handling of institution's fund, 1914–15.*

Institutions.	Income.	Expenditures for administration.
University of Alabama	$210,421	$13,075
University of Arizona	423,021	9,559
Central College, Arkansas	29,193	4,000
Hendrix College, Arkansas	39,966	6,847
Pomona College, California	347,133	17,224
Occidental College, California	50,727	7,803
Mills College, California	80,774	8,268
University of Redlands, California	50,505	16,178
University of Santa Clara, California	274,200	.....
Leland Stanford Junior University, California	1,235,891	44,532
University of Colorado	300,436	23,000
Colorado College	148,887	9,890
University of Denver, Colorado	140,000	.....
Trinity College, Connecticut	83,835	10,812
Yale University, Connecticut	1,777,134	114,000
Gallaudet College, District of Columbia	.....	.....
George Washington University, District of Columbia	220,954	17,141
Howard University (colored), District of Columbia	203,964	15,980
University of Florida	170,297	6,100
Columbia College, Florida	.....	9,576
Florida State College for Women	97,885	.....
University of Georgia	286,302	12,628
Atlanta University (colored), Georgia	62,927	6,637
Cox College, Georgia	31,000	5,000
North Georgia Agricultural College	38,700	1,500
Agnes Scott College, Georgia	94,711	8,109
Piedmont College, Georgia	34,719	34,000
Bessie Tift College, Georgia	56,000	22,400
Brenau College, Georgia	151,860	18,873
Emory University, Georgia	.....	2,167
Shorter College, Georgia	70,560	.....
University of Idaho	264,867	17,180
Aurora College, Illinois	.....	.....
Illinois Wesleyan University	49,851	12,570
Blackburn College, Illinois	14,618	200
De Paul University, Illinois	53,434	.....
Loyola University, Illinois	.....	.....
James Millikin University, Illinois	96,588	10,798
Knox College, Illinois	71,155	7,814
Illinois Woman's College	104,984	16,021
Lake Forest College, Illinois	216,153	5,535
Frances Shimer School, Illinois	43,823	2,350
Northwestern College, Illinois	40,082	2,353
Rockford College, Illinois	92,189	13,858
Augustana College, Illinois	99,914	5,052
Indiana University	615,000	33,984
Wabash College, Indiana	57,702	3,567
Earlham College, Indiana	117,551	17,000
Franklin College, Indiana	48,253	6,052
De Pauw University, Indiana	127,726	14,950
Butler College, Indiana	45,314	7,583
University of Notre Dame, Indiana	.....	.....
Taylor University, Indiana	47,135	1,675
Iowa State Teachers College	331,865	22,346
Coe College, Iowa	63,452	6,800
Wartburg College, Iowa	19,797	.....
Des Moines College, Iowa	51,229	3,000
Drake University, Iowa	189,718	10,000
Parsons College, Iowa	38,217	4,718
State University of Iowa	986,513	28,313
Cornell College, Iowa	132,079	10,393
Central University of Iowa	18,850	1,500
Morningside College, Iowa	46,344	6,000
Buena Vista College, Iowa	20,072	3,000
Midland College, Kansas	$25,000	$2,500
College of Emporia, Kansas	36,549	4,135
Ottawa University, Kansas	38,978	3,489
Kansas Wesleyan University	20,045	250
Cooper College, Kansas	21,453	.....
Washburn College, Kansas	78,753	8,608
Southwestern College, Kansas	43,615	5,792
Ogden College, Kentucky	11,018	12,000
Centre College, Kentucky	.....	3,000
Georgetown College, Kentucky	41,215	5,900
University of Kentucky	321,062	11,620
Transylvania College, Kentucky	41,270	4,154
University of Louisville, Kentucky	79,250	1,360
Bethel College, Kentucky	12,490	1,542
H. Sophie Newcomb Memorial College, Louisiana	166,936	9,095
Loyola University, Louisiana	.....	.....
Bowdoin College, Maine	151,563	6,850
Bates College, Maine	89,809	9,371
University of Maine	364,042	11,308
St. John's College, Maryland	53,000	750
Goucher College, Maryland	212,569	11,520
Johns Hopkins University, Maryland	628,830	20,817
Morgan College (colored), Maryland	34,213	1,900
Washington College, Maryland	62,795	700
Rock Hill College, Maryland	26,000	24,000
Hood College, Maryland	71,840	1,605
Maryland College for Women	.....	.....
Amherst College, Massachusetts	221,817	.....
Boston University, Massachusetts	222,474	2,612
Harvard University, Massachusetts	3,019,602	92,683
Smith College, Massachusetts	736,734	37,058
Wheaton College, Massachusetts	119,676	8,240
Mount Holyoke College, Massachusetts	336,998	233,083
Tufts College, Massachusetts	301,955	.....
Clark College, Massachusetts	85,250	6,680
Alma College, Michigan	54,673	2,800
University of Michigan	2,321,241	126,651
St. John's University, Minnesota	71,145	.....
Augsburg Seminary, Minn	21,007	1,500
Carleton College, Minnesota	204,584	13,946
Hamline University, Minnesota	63,264	8,415
Macalester College, Minnesota	55,796	5,846
College of St. Catherine, Minnesota	.....	8,000
Gustavus Adolphus College, Minnesota	42,295	2,760
College of St. Teresa, Minnesota	72,500	.....
Mississippi College	60,293	.....
Meridian College, Mississippi	.....	.....
University of Mississippi	269,500	9,000
Stephens College, Missouri	49,000	4,411
Westminster College, Missouri	.....	3,030
William Jewell College, Missouri	84,047	8,016
Park College, Missouri	91,708	.....
Lindenwood College, Missouri	128,307	550
Forest Park College, Missouri	.....	.....
St. Louis University, Missouri	.....	.....
Washington University, Missouri	716,471	17,838
Drury College, Missouri	54,084	5,225
Central Wesleyan College, Missouri	24,607	2,000
University of Montana	215,945	16,925
Bellevue College, Nebraska	36,155	7,000
Union College, Nebraska	66,159	3,783
Doane College, Nebraska	45,448	3,742

TABLE 12.—*Income and expenditures for administration, including handling of institution's fund, 1914–15*—Continued.

Institutions.	Income.	Expenditures for administration.
University of Nebraska	$1,368,039	$106,807
New Hampshire College of Agriculture and Mechanic Arts	273,236	12,000
College of St. Elizabeth, New Jersey	48,675	.....
Upsala College, New Jersey	13,158	1,210
University of New Mexico	62,577	800
New York State College for Teachers	110,103	5,700
Alfred University, New York	36,307	6,724
St. Stephen's College, New York	48,592	35,000
Wells College, New York	146,774	10,213
St. Lawrence University, New York	236,341	3,711
Elmira College, New York	104,543	.....
Hobart College, New York	125,890	15,000
College of New Rochelle, New York	70,289	.....
Barnard College, New York	262,423	15,211
Columbia University, New York	4,204,937	1,407,745
College of the City of New York	526,108	17,336
Hunter College of the City of New York	550,124	51,390
New York University	630,415	1,894
Vassar College, New York	774,613	36,745
University of Rochester, New York	139,996	22,959
Union University, New York	140,117	8,692
University of North Carolina	261,658	9,430
Davidson College, North Carolina	51,830	6,000
Trinity College, North Carolina	118,829	12,498
Elon College, North Carolina	52,686	3,050
Guilford College, North Carolina	43,600	1,200
Shaw University (colored), North Carolina	37,257	.....
Weaver College, North Carolina	.....	.....
Salem Academy and College, North Carolina	113,367	.....
University of North Dakota	268,947	26,981
Municipal University of Akron, Ohio	65,833	6,949
Ohio University	419,250	13,380
Baldwin-Wallace College, Ohio	46,447	2,417
Bluffton College, Ohio	10,456	.....
Cedarville College, Ohio	7,708	933
University of Cincinnati, Ohio	867,985	44,714
Western Reserve University, Ohio	438,278	.....
Capital University, Ohio	24,883	2,200
St. Mary College, Ohio	.....	.....
Defiance College, Ohio	41,688	2,600
Ohio Wesleyan University	145,300	16,149
Kenyon College, Ohio	66,841	4,750
Marietta College, Ohio	42,929	7,000
Muskinghum College, Ohio	50,016	5,813
Miami University, Ohio	328,734	9,217
Oxford College for Women, Ohio	53,127	7,438
Western College for Women, Ohio	112,384	8,850
Lake Erie College, Ohio	76,189	12,336
Rio Grande College, Ohio	8,200	1,000
Otterbein University, Ohio	59,196	3,824
College of Wooster, Ohio	210,004	10,045
Methodist University of Oklahoma	14,315	3,215
Kingfisher College, Oklahoma	17,268	511
University of Oklahoma	231,147	35,306
Albany College, Oregon	22,225	3,409
Pacific University, Oregon	31,802	4,852
McMinnville College, Oregon	27,247	7,020
Pacific College, Oregon	7,500	3,482
Reed College, Oregon	122,850	6,000
Willamette University, Oregon	$39,080	$5,540
Moravian College, Pennsylvania	33,402	.....
Bryn Mawr College, Pennsylvania	280,562	28,633
Beaver College, Pennsylvania	24,667	3,496
Wilson College, Pennsylvania	65,416	8,370
Lafayette College, Pennsylvania	130,484	5,070
Pennsylvania College	65,000	6,700
Haverford College, Pennsylvania	160,588	9,950
Franklin and Marshall College, Pennsylvania	47,705	6,631
Lincoln University (colored), Pennsylvania	35,951	1,462
Allegheny College, Pennsylvania	102,568	8,527
Irving Female College, Pennsylvania	35,541	1,000
Albright College, Pennsylvania	41,487	2,290
Westminster College, Pennsylvania	69,914	.....
Drexel Institute, Pennsylvania	95,138	.....
University of Pennsylvania	1,738,088	599,735
Susquehanna University, Pennsylvania	31,600	4,000
Pennsylvania State College	941,309	50,502
Swarthmore College, Pennsylvania	227,009	17,602
Washington and Jefferson College, Pennsylvania	68,941	9,000
Waynesburg College, Pennsylvania	20,685	2,250
College of Charleston, South Carolina	22,102	1,500
University of South Carolina	142,227	30,200
Furman University, South Carolina	49,447	.....
Columbia College, South Carolina	.....	.....
Converse College, South Carolina	74,567	5,458
Wofford College, South Carolina	39,578	3,375
University of South Dakota	194,772	7,920
King College, Tennessee	.....	.....
University of Chattanooga, Tennessee	49,917	5,500
Tusculum College, Tennessee	64,011	4,625
Knoxville College (colored), Tennessee	41,580	2,314
Milligan College, Tennessee	.....	12,500
Tennessee College	52,536	12,173
George Peabody College for Teachers, Tennessee	169,243	13,328
Fisk University (colored), Tennessee	54,242	8,070
Vanderbilt University, Tennessee	268,292	109,000
University of the South, Tennessee	131,736	9,638
University of Texas	602,609	31,373
Howard Payne College, Texas	22,000	.....
Rice Institute, Texas	520,000	27,085
Austin College, Texas	82,880	.....
Baylor University, Texas	148,919	15,197
University of Utah	241,919	9,300
Middlebury College, Vermont	126,925	10,965
St. Michael's College, Vermont	22,450	.....
Bridgewater College, Virginia	25,414	.....
University of Virginia	444,315	35,241
Roanoke Institute, Virginia	.....	.....
Emory and Henry College, Virginia	53,254	.....
Hampden-Sidney College, Virginia	25,712	2,780

TABLE 12.—*Income and expenditures for administration, including handling of institution's fund, 1914–15*—Continued.

Institutions.	Income.	Expenditures for administration.	Institutions.	Income.	Expenditures for administration.
Hollins College, Virginia	$107,489	$9,261	Lawrence College, Wisconsin	$110,566	$6,082
Washington and Lee University, Virginia	104,759	16,292	Beloit College, Wisconsin	138,298	15,118
Randolph-Macon Women's College, Virginia	202,900	9,737	University of Wisconsin	2,767,701	121,518
Richmond College, Virginia	.....	9,357	Milton College, Wisconsin	20,835	244
Virginia Union University (colored)	38,113	500	Concordia College, Wisconsin	28,455	.....
College of William and Mary, Virginia	53,550	3,560	Milwaukee - Downer College, Wisconsin	131,164	10,654
University of Washington	564,804	50,988	Mission-House, Wisconsin	.....	.....
Spokane College, Washington	.....	8,400	Campion College, Wisconsin	65,770	.....
Davis and Elkins College, West Virginia	16,600	4,089	Ripon College, Wisconsin	60,784	47,611
			St. Clara College and Academy, Wisconsin	35,134	.....

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BULLETIN, 1918, No. 31

THE EDUCATIONAL SYSTEM OF SOUTH DAKOTA

REPORT OF A SURVEY MADE UNDER THE DIRECTION OF THE UNITED STATES COMMISSIONER OF EDUCATION

WASHINGTON
GOVERNMENT PRINTING OFFICE
1918

BULLETIN OF THE BUREAU OF EDUCATION FOR 1918.

No. 1. Monthly record of current educational publications, January, 1918.
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No. 4. Monthly record of current educational publications, February, 1918.
No. 5. Work of the Bureau of Education for the natives of Alaska, 1916–17.
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No. 20. Monthly record of current educational publications, June, 1918.
No. 21. Instruction in journalism in institutions of higher education. James M. Lee.
No. 22. Monthly record of current educational publications—Index, February, 1917, to January, 1918.
No. 23. State laws relating to education enacted in 1915, 1916, and 1917. William R. Hood.
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No. 26. The National Council of Primary Education.
No. 27. Rural teacher preparation in State normal schools. Ernest Burnham.
No. 28. The public schools of Columbia, S. C.
No. 29. American agricultural colleges. Chester D. Jarvis.
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DEPARTMENT OF THE INTERIOR
BUREAU OF EDUCATION

BULLETIN, 1918, No. 31

THE EDUCATIONAL SYSTEM OF SOUTH DAKOTA

REPORT OF A SURVEY MADE UNDER THE DIRECTION OF THE UNITED STATES COMMISSIONER OF EDUCATION

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LETTER OF TRANSMITTAL.

DEPARTMENT OF THE INTERIOR,
BUREAU OF EDUCATION,
Washington, October 21, 1918.

SIR: I am submitting herewith for publication as a bulletin of the Bureau of Education the manuscript of the report of a survey of the educational system of the State of South Dakota, made under my direction at the request of the South Dakota Educational Survey Commission created by the legislature of the State, as set forth in the body of this report. The survey includes the State and local educational organization and administration in South Dakota; the elementary and secondary schools of the State and the preparation of teachers for these schools; and the higher educational institutions of the State, including the University of South Dakota, the State College of Agriculture and Mechanic Arts, the State School of Mines, the four State normal schools, and such accredited private colleges and schools for special classes as it was found necessary to include to make this a comprehensive study of the entire educational system of the State.

The survey was made by Dr. H. W. Foght, specialist in rural school practice, who had charge of the field work and the preparation of the manuscript; Dr. Samuel P. Capen, specialist in higher education; Mrs. Henrietta W. Calvin, specialist in home economics; Dr. Chester D. Jarvis, specialist in agricultural education; Miss Edith A. Lathrop, assistant in rural education; Dr. H. B. Wilson, superintendent of schools, Topeka, Kans.; Dr. William F. Russell, dean of the school of education, University of Iowa; and Dr. Alexander J. Inglis, professor of secondary education, Harvard University. The report and conclusions of the committee were approved by me and were transmitted to the South Dakota Educational Survey Commission June 16, 1918.

Accompanying this report is a brief report by the South Dakota Survey Commission to the Governor of the State, approving and accepting in full the conclusions of the survey committee.

Respectfully submitted.

P. P. CLAXTON,
Commissioner.

The SECRETARY OF THE INTERIOR.

REPORT AND RECOMMENDATIONS OF THE SOUTH DAKOTA EDUCATIONAL SURVEY COMMISSION.

In these days when efficiency is demanded of every person and organization, the more progressive States have begun to ascertain whether all is being done to make their schools as effective and efficient as possible, as the best means of meeting the crisis of reconstruction that is certain to come to the average American State at the close of the world war.

The Legislature of South Dakota, being desirous of keeping the State in the vanguard educationally and believing that the strength and weakness of the present educational system can best be disclosed by careful survey of the educational departments and institutions of the State, in its fifteenth legislative session, 1917, passed the following act:

(S. B. 130) Chapter 226, 1917 Session Laws.

AN ACT Providing for a State educational survey and appropriating money therefor.

Be it enacted by the Legislature of the State of South Dakota:

SECTION 1. The governor shall appoint a commission of three members, all of whom shall serve without compensation, to make a survey of the public educational system of South Dakota, including all schools and educational institutions supported by public funds, to determine the efficiency of the same, and to report its findings with recommendations for increased efficiency and economy to the governor on or before July 1, 1918.

SECTION 2. The said commission shall employ an expert or experts nominated by and to work under the direction of the United States Bureau of Education, who shall not be residents of the State of South Dakota, to make such survey, and shall supply such assistants and equipment as shall be necessary. The said commission shall, after consulting with the United States Bureau of Education, fix the compensation of such expert or experts and assistants.

SECTION 3. The said commission and its employees shall have free access to all public records. All public school and educational institutions, teachers, instructors, faculties, officers, and employees shall furnish all information and assistance in their power to and in making such survey. The members of said commission, experts or assistants, shall have the production of papers and records and are hereby empowered to administer oaths. In case any person summoned by any member of such commission, experts, or assistants shall fail or refuse to obey such process or to testify before such commission, experts, or assistants, the said commission, experts, or assistants may apply to the circuit courts of this State to compel obedience and testimony, and the circuit courts are hereby empowered to enforce obedience to such process.

SECTION 4. The said commission shall, in addition to other work specified by this act, direct special attention to the matter of the number of available teachers

in the State, their qualifications and to the feasibility and advisability of consolidating any of the existing State educational institutions or departments thereof.

SECTION 5. There is hereby appropriated out of any money in the treasury not otherwise appropriated the sum of $6,500, or so much thereof as may be necessary, for the purpose of defraying the cost of such survey as is hereinbefore provided, including the personal traveling expenses of members of said commission in connection therewith, which money shall be paid upon warrants of the State auditor issued upon vouchers duly approved by the State superintendent of public instruction: *Provided*, That in no case shall the total expense of such survey exceed the sum of $6,500.

SECTION 6. An emergency is hereby declared to exist, and this act shall be in force and effect from and after its passage and approval.

In accordance with this law, Gov. Norbeck on September 6, 1917, appointed as members of the State educational commission Mr. A. M. Anderson, of Sturgis; Mr. C. E. Swanson, of Sisseton; and Miss Ruth E. Sabin, of Lake Andes. The first meeting of the survey commission was held at Pierre, October 6, 1917, at which time plans for the survey, outlined by Dr. P. P. Claxton, United States Commissioner of Education, were discussed and adopted. A second meeting was held at Sioux Falls, November 27, 1917. In this meeting the Commissioner of Education was represented by Dr. Harold W. Foght, specialist in rural school practice in the Bureau of Education, who further outlined the plans of procedure and presented to the commission the list of educational experts appointed by the Commissioner of Education for the survey. The survey committee, comprising five Bureau of Education experts and three additional experts from different States and educational institutions, were formally accepted by the survey commission. They were:

Dr. Harold W. Foght, specialist in rural school practice, in charge of the survey.
Dr. Samuel P. Capen, specialist in higher education.
Mrs. Henrietta W. Calvin, specialist in home economics.
Dr. Chester D. Jarvis, specialist in agricultural education.
Miss Edith A. Lathrop, assistant in rural education.

Assisted by the following educational experts:

Dr. H. B. Wilson, superintendent of schools, Topeka, Kans.
Dr. William F. Russell, dean of the school of education, University of Iowa.
Dr. Alexander J. Inglis, professor of secondary education, Harvard University.

A final conference was held at Pierre from June 16 to 18. In addition to the members of the State commission there were present the presidents of the State's higher educational institutions and the presidents of the accredited denominational colleges, the State superintendent of public instruction, the State historian, and others professionally interested in the conference. The final report of the Commissioner of Education was made at this meeting by Dr. Harold W. Foght, of the Bureau of Education.

After thorough discussion and careful consideration the survey commission unanimously accepted all but one of the recommendations made by the survey experts. This one exception was the section referring to the disposal of the school of mines. Upon this section (substitute recommendation 1, chapter 20) Mr. Swanson and Miss Sabin voted to accept the recommendation made by the survey experts, and Mr. Anderson voted no.

The State survey commission urge upon the governor and the sixteenth legislative assembly that the administrative and legislative plans and recommendations laid down in the body of this report be enacted into law at the earliest opportunity or shaped into administrative policy by the State board of regents and other boards and the State department of public instruction.

To the end, finally, that the legislative recommendations may be enacted into law, the commission recommends that the following amendments to the constitution be adopted at the present session:

1. Amend section 3 of article 14 of the constitution to enlarge the powers and duties of the State board of regents of education.

2. Constitutional amendment providing that the legislature may determine the method of selecting the State superintendent of public instruction and county superintendents of schools, and fixing their qualifications, compensation, tenure of office, and powers and duties, anything in the constitution to the contrary notwithstanding.

3. Amendment to section 3 of article 8 of the constitution to provide that the interest and income of the school fund shall be apportioned to the school districts on the basis of aggregate daily attendance of pupils and the number of teachers employed.

4. Amend sections 1, 2, and 3 of article 14 of the constitution to relieve the State board of charities and corrections of the control of the State School for the Blind, the State School for the Deaf and the State Training School, and to place these institutions under the control of the State board of regents of education, anything in the constitution to the contrary notwithstanding.

The commission desires to express its appreciation of the generous and whole-hearted help given the work by the State superintendent of public instruction, the State historian, the heads of educational institutions, the county superintendents and teachers throughout the State; and to Dr. P. P. Claxton, United States Commissioner of Education, for the painstaking and thoroughgoing survey of education made under his direction, and particularly to Dr. Harold W. Foght, who had charge of the field work and the general preparation of the report, for his untiring efforts and courtesy.

Respectfully submitted.

RUTH E. SABIN,
C. E. SWANSON,
A. M. ANDERSON.

INTRODUCTORY.

Steps leading to the survey.—The present educational survey of South Dakota is the direct result of a demand by the people of the State for a school system to meet in every way the modern requirements of organized, efficient industrial life, as it is lived in the great agricultural Commonwealths of the United States. There has been a deep-seated public feeling that the schools of the State—especially the rural schools—have not kept pace with the economic development of this great agricultural State. The people of South Dakota seem determined that the young State shall not allow itself to become afflicted with the extreme conservatism and inertness that have sometimes shown themselves in the older sections of the country.

This desire has found expression in the present survey of the educational system of the State. The State Teacher Association of South Dakota has repeatedly gone on record in favor of educational improvement. In 1915 the association appointed a committee of educators to create sentiment in favor of a school survey. The work thus begun culminated in the survey act of 1917, which is given in full in the preceding report of the State survey commission. The proposed survey was strongly indorsed by the Hon. Frank M. Byrne, retiring governor, and the Hon. Peter Norbeck, present governor of the State. It had also the hearty indorsement of the State superintendent of public instruction, superintendents and teachers of the State, and of farmers' organizations, business men's clubs, and women's clubs throughout the State.

The act contains the following provisions:

1. The actual work of the survey shall be done by or under the direction of the United States Bureau of Education.

2. The State commission and the survey experts shall have free access to all public records.

3. The State commission and survey experts shall have the assistance of all public schools and other educational institutions, teachers, officers, and employees.

It was further agreed by the State commission and the Commissioner of Education that the survey report should be published as a bulletin by the Bureau of Education.

Organization of the field work.—Immediately after its organization at Pierre, October 6, 1917, the State survey commission called upon the Bureau of Education to furnish the expert assistance agreed upon and to take charge of the survey. The Commissioner of Edu-

cation immediately took steps to organize the necessary staff, which began its preliminary study in December, 1917, by placing in the hands of supervising officers, public-school teachers, and faculties of the higher educational institutions questionnaires and other outlines to procure such data as could not be procured from State records or in other ways. The actual field work began early in January and continued till late in March.

Dr. H. W. Foght had general charge of the field work and preparation of the manuscript. He spent 70 days on work in the field, studying particularly State and local school organization, administration, and supervision; school statistics; school support; preparation of public-school teachers; and school consolidation and rural high schools. He prepared the following chapters of the report: I to VIII, inclusive; XI, XVII to XIX, inclusive; and XXI.

Drs. Samuel P. Capen, Alexander J. Inglis, Chester D. Jarvis, and Mrs. Henrietta W. Calvin made a searching study of all the higher educational institutions in the State, which it is hoped may be published by the bureau as a separate bulletin. A condensed form of this study appears as Chapter XX in this report.

Mrs. Henrietta W. Calvin studied home economics as a phase of the entire educational system and prepared Chapter XIII and portions of other chapters. She devoted 45 days to field study.

Miss Edith A. Lathrop spent 70 days in the State devoting the time to survey of rural and village schools. She prepared Chapters X; XII, and XIV.

Dr. H. B. Wilson gave his time to town and city schools, which study is embodied in Chapter XV.

Dr. Willam F. Russell surveyed the high schools of the State and made a study of financial maintenance of the normal schools. In this study he had the assistance of several members of the faculty of the school of education, University of Iowa. The high-school study forms Chapter XVI of the report.

Dr. Walton C. John, specialist in charge of land-grant statistics in the Bureau of Education, prepared Chapter IX, on school support, in cooperation with Dr. Foght; he also prepared several sections of the report on higher education.

Acknowledgment.—The bureau survey committee wishes to acknowledge its obligation to the members of the State survey commission for their many courtesies and hearty cooperation throughout the study; to the State department of public instruction for valuable help in procuring and compiling educational statistics; to the State historian for valuable documentary information; and to the heads of the State's higher educational institutions and the private colleges and the county and city superintendents and the teachers of the State for valuable advice and constant cooperation.

THE EDUCATIONAL SYSTEM OF SOUTH DAKOTA.

Chapter I.

SOUTH DAKOTA, THE LAND AND PEOPLE.

General topography.—South Dakota is a mighty domain, measuring 380 miles from east to west and 248 miles from north to south. It has a total area of 77,615 square miles, of which 76,868 square miles are land and 747 are water surface. In size it ranks as fourteenth among the States of the Union.

Excepting the Black Hills region, the State is a great rolling plain—the eastern portion forming a part of the lower prairie-plains section, the western lying in the Great Plains. The land rises gradually from an altitude of about 1,000 feet along the eastern border to 3,500 feet in the west, culminating with an altitude of 7,242 feet (Harney Park) in the great domelike Black Hills. The mean elevation is nearly 2,200 feet.

The Missouri River divides the State into two sections of almost equal size but greatly divergent in topographical features. The eastern half has been scoured down by the ancient ice sheet, which has left it gently rolling and traversed by two flat river valleys with somewhat higher intervening watersheds. In the northeast of this section lies the Coteau de Prairies, a ridge of low moraine hills, which form the watershed between South Dakota and Minnesota. This section is dotted with small lakes of glacial origin. Southward lies the fertile James River Valley—the remains of the ancient "Dakota Lake," and the Great Sioux Valley. West of these fertile valleys lies the Coteau du Missouri, a hill region with a mean elevation of about 1,800 feet. This ridge forms the watershed between the Missouri and the James. The soil of the eastern section is a deep alluvial loam overlaid with a rich vegetable mould. This half of the State is therefore particularly well adapted for diversified agriculture.

The land west of the Missouri is rugged and broken by stream erosion. The continental ice sheet left it untouched, by reason of which this part of the State has a most perfect drainage system, being gullied deep by shallow streams, giving it a highly broken

contour of plateau lands cut by steep narrow valleys, weird towering buttes, and, in the extreme southwest, the picturesque Bad Lands, or Terres Mauvaises of the early French voyajeur. The latter are still in a state of soil erosion, so that much of it is devoid of vegetation and practically useless. Finally, on the western border, lie the Black Hills, a great mountain uplift 125 miles long and 60 miles wide.

The great plains west of the Missouri are best adapted for grazing purposes. The soil is composed of a variety of clays overlaid with some alluvial loam, but lacking in vegetable mould. By reason of their higher altitude, certain areas in the western half of the State have an insufficient annual rainfall to assure the farmer of good crops. Dry farming is utilized successfully, and, wherever practicable, irrigation is resorted to. The most notable project of this kind is on the Belle Fourche River in the northern spurs of the Black Hills, where 100,000 acres have been reclaimed by irrigation.

South Dakota has a continental climate with great extremes of temperature. In summer the temperature often rises above 100° Fahrenheit, and in winter occasionally falls to more than 40° below zero. But, fortunately, the dryness of the atmosphere mitigates these extremes and renders the climate, on the whole, invigorating and pleasant.

The amount of rainfall has been a great determining factor in the life and occupations of the people. The average rainfall is about 20 inches, being upward of 28 inches in the eastern third, 17 to 28 inches in center, and 12 to 17 inches in the western third, which latter is insufficient to assure crops. The middle section suffers from occasional droughts, and never produces such abundant crops as are common to the eastern third of the State. The eastern half of South Dakota is a natural agricultural region. The plains west of the Missouri are a natural grazing region which should be devoted in the main to stock raising. The Black Hills region offers a variety of occupations, such as mining, lumbering, stock raising, fruit growing, and agriculture under irrigation.

Economic and industrial conditions.—Of the entire population, 78½ per cent live in the open country and in rural villages of less than 1,000 population, and gain their livelihood directly from the land. Only 125,404 persons, or 21.5 per cent (1915), live in places of more than 1,000 population. Fully three-fourths of the people of South Dakota may, therefore, be classed as rural population, whose chief occupation is agriculture and stock raising. Gold and silver mining and lumbering are minor occupations, limited to the Black Hills. Stone quarrying is also a profitable occupation in limited areas. A variety of manufacturing industries engage a small portion of the people in the larger towns and cities. But, after all, agricul-

ture is the chief industry, about which all the other occupations revolve as subsidiary.

Table 1 contains an enumeration of persons over 10 years of age (1915) engaged in useful occupations. The chief occupations alone are included:

TABLE 1.—*Occupations of population.*

Agents	1,031	Stationary engineers	680
Agricultural laborers	1,214	Farmers	96,726
Bankers	1,277	Housewives	118,110
Blacksmiths	1,027	Common laborers	19,532
Bookkeepers	738	Machinists	1,023
Carpenters	1,841	Masons	745
Clergymen	916	Merchants	6,849
Contractors	836	Miners	1,910
Commercial travelers	319	Nurses	741
Dairymen	302	Officials	1,349
Dressmakers	887	Painters	1,050
Druggists	109	Railway employees	2,589
Electricians	124	Salesmen	2,863
Teachers	5,913	Servants	4,219
Stenographers	978	Stockmen	2,418

At the top of the list numerically stands housewifery, with a total of 118,110. Next come farmers with 96,726, to which group might be properly added agricultural laborers and certain others enumerated under sundry occupations. The group designated as stockmen is limited to "ranchmen" in the larger sense. This number is small, as is also the group devoted to mining.

Agricultural development.—The total land area in acres is 49,195,520, of which 23,820,436 acres were in farms in 1915, as against 16,442,322 in farms in 1905. The total number of farms was 101,224 in 1915, and the average size per farm 235 acres, as against 52,376 farms in 1905, with the average size per farm 314 acres. Not alone is there a tendency to reduce the size per farm, but the acreage of improved farms has increased from 15,827,208 in 1910 to 23,552,770 acres in 1915. A large proportion of the farms is still operated by their owners, although this class unfortunately has increased only slightly during the last five-year period. The tenant farmer, on the other hand, is increasing rapidly, as may be ascertained from Table 2. This is an unfortunate circumstance which can not be remedied until life in the open country becomes stabilized through a new kind of educated leadership, culminating in more wholesome, complete living in agricultural communities than is now possible.

TABLE 2.—*Agricultural development by years.*

	1915	1910	1905
Area of State, in acres	49,195,520	.....	.....
Acres in farms	23,820,436	26,016,892	16,442,322
Acres improved	23,552,770	15,827,208	.....
Number of farms	101,224	77,644	52,376
Average size, in acres	235	335	314
Operated by owners	59,989	57,948	30,322
Operated by tenants	41,235	19,231	22,050

The farmers of the State are becoming well-to-do, some of them wealthy. Many of the latter class are retiring to the larger towns and cities, where the educational facilities and social opportunities are greater than in the open country. The production of new wealth from the land is quite marked. Thus in 1908 the production in grain, hay, fruits, live stock, dairy products, wool and hides, etc., reached a total of $185,434,000; in 1917 the value of the production from the soil amounted to $465,350,000, or an average of $4,498 produced by each farm during the year, a very large average as compared with other States.

The production of wealth is not uniformly distributed over the 101,224 farms. The average for the eastern half of the State is far above that of the western half. Where production of ordinary farm crops is attempted in the semi-arid western and northwestern sections, the net income is often very small. These folk must be kept in mind when discussing school education of these regions, in later chapters.

A good idea of this unequal distribution of wealth or ability to produce new wealth, acre for acre, may be ascertained by studying the accompanying map issued by the South Dakota tax commission. It gives the assessed land valuation by years.

Distribution and racial composition of the population.—According to the State census taken May 1, 1915, South Dakota has a population of 582,765, a decrease of 1,123 persons from the Federal Census of 1910. Table 3 shows a substantial growth in population since 1890, when it totaled 348,600.

TABLE 3.—*Urban and rural population, 1890–1915.*

Census year.	Population.			Per cent of total population.	
	Urban.	Rural.	Total.	Urban.	Rural.
1890	28,555	320,045	348,600	8.2	91.8
1900	40,936	360,634	401,570	10.2	89.8
1910	76,673	507,215	583,888	13.1	86.9
1915	84,762	498,003	582,765	14.5	85.5

The per cent of population, urban and rural, has changed from 8.2 urban and 91.8 rural in 1890 to 14.5 urban and 85.5 rural in 1915.[1] However, on the basis of aggregate increase, urban centers have added only 56,207 during the 25-year period, while rural districts have increased 234,165.

[1] In this statement the population of cities of 2,500 and over are counted as urban.

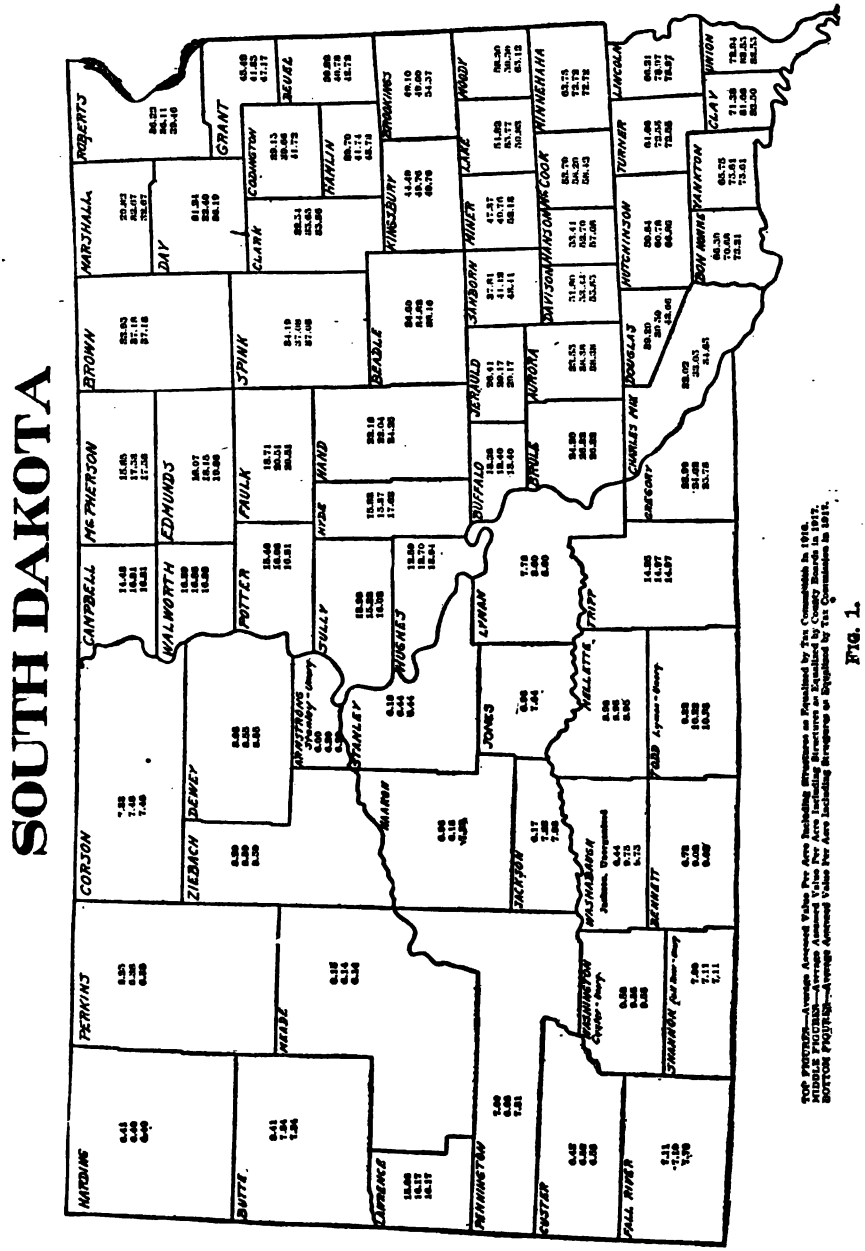

FIG. 1.

TOP FIGURE—Average Assessed Value Per Acre Including Structures as Equalized by Tax Commission in 1916.
MIDDLE FIGURE—Average Assessed Value Per Acre Including Structures as Equalized by County Boards in 1917.
BOTTOM FIGURE—Average Assessed Value Per Acre Including Structures as Equalized by Tax Commission in 1917.

The slight drop in population since 1910—

is due to the fact that the census of 1910 was taken when the homestead movement into the trans-Missouri region was at the crest. In a great measure the homesteaders who located at that time did not remain to till the lands but left them after securing title from the Government.[1]

Under the definition of urban and rural as used by the Federal Census Office, South Dakota would have only 13 urban centers, i. e., places of more than 2,500 population. However, for the convenience of the present survey the State's own classification has been adopted. This classes as urban all places of more than 1,000 population, everything else being rated as rural. The latter classification gives the State six cities ranging downward in population from 21,000 to 5,000: 10 cities from 5,000 to 2,000; and 23 places of less than 2,000 and above 1,000 population.

Racial composition of the population.—Only 15.5 per cent of the people now living in the State are foreign born. Foreign immigration has practically ceased. The immigrants of recent years have come in the main from other American States, very few coming direct from overseas. The percentage of foreign born to the whole population has declined, decade by decade, since 1880, as follows: 1870, 31.7 per cent; 1880, 34 per cent; 1890, 27.6 per cent; 1900, 22 per cent; 1910, 17.5 per cent; 1915, 15.5 per cent.

Of the foreign-born population now in the State over 56 per cent have resided in the United States more than 20 years, and over 43 per cent have resided in South Dakota more than 20 years. Finally, less than 10 per cent of South Dakota's foreign-born population have resided in the United States less than 5 years. From this it appears that the problem of the foreign born and the question of final assimilation and Americanization should not have been of serious consideration had the commonwealth always been alert, and through school education and in other ways had hastened the Americanization of these aliens.

Figure 2 shows graphically the race origin of the people who dwell in South Dakota. It is based on the third census of South Dakota. The classification is based on ethnic or ancestral origin instead of political allegiance, as is usually followed in the Federal census. All are classed as American who "come from families so long settled that knowledge of foreign origin has been lost." It will be noted that the ethnic group marked "German" ranks second to the "American" only. This includes many thousand German-Russians who in the Federal census are classed as "Russian."

The assimilation process of the foreign elements in the population has been retarded because the foreign born have gathered largely in

[1] Third census of the State of South Dakota, p. 12.

settlements, some of them extending over several counties. Some counties, Hutchinson for example, are largely peopled by German stock. A large portion of the school population attend German Catholic or German Lutheran parochial schools in which German has been used largely as a medium of instruction.[1] In this county

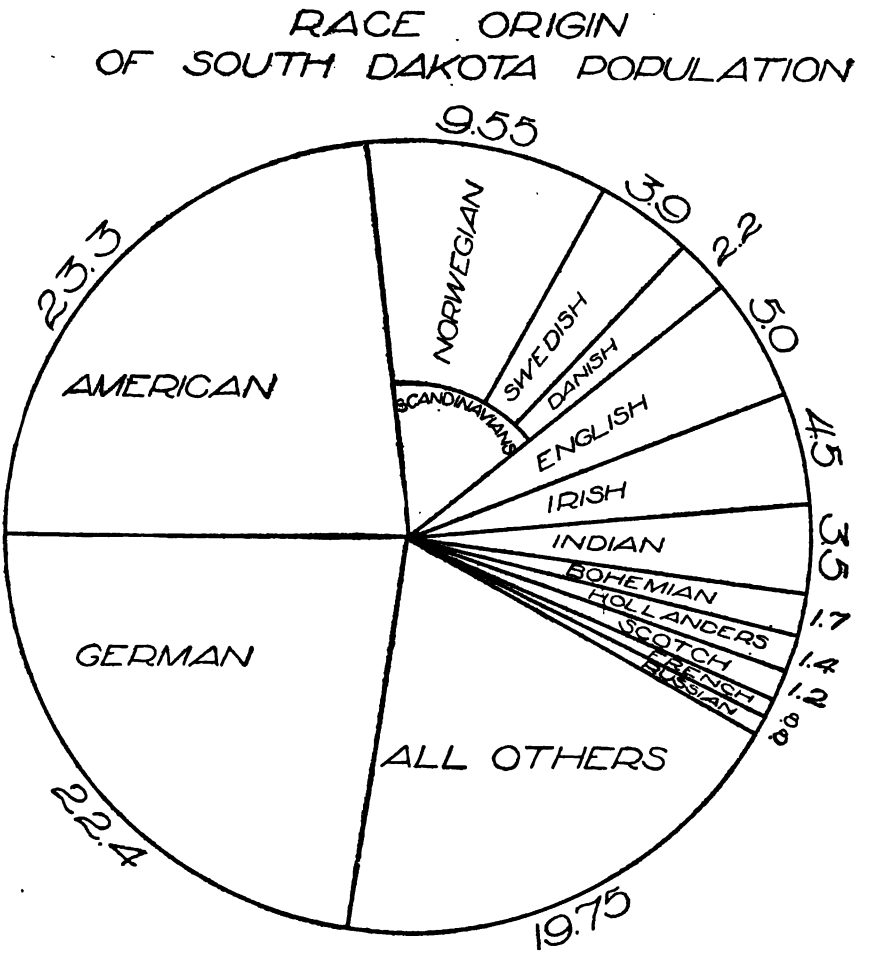

FIG. 2.

and in Hanson County the German-Russian Mennonites still live the quaint community life brought with them from Russia. German, not English, is the language of the villages, although in most of the schools English is the medium of instruction. The German-Russians have settled chiefly in the north-central and northwestern parts of the State, where they have spread over many counties. Because

[1] Recently stopped by order of the State council of defense.

of numbers, more than for other reasons, have these people been slow to become Americanized. Scandinavians and Swedish Finns comprise a large per cent of the population. They settled the State at an early date and became possessed of the best land; from the first they have taken a leading part in the political and economic life of the State. By reason of their close kinship to people of Anglo-American origin, in tradition, history, and ideals, they are easily Americanized and so form no special problem.

Illiteracy and school education.—The Federal census of 1910 places the number of illiterates in the State 10 years of age and over at 12,750, or 2.9 per cent of the total population. However, only 0.4 per cent of the native whites are classed as illiterates, and 5 per cent of the foreign-born whites. More than one-half of the persons included above as illiterates were Indians and therefore were wards of the National Government. They should not have been included. The State census of 1915, on the other hand, gives the total number of white illiterates, native and foreign born, at 3,134, or 0.72 per cent of the whole population. This places South Dakota close to the first rank in low per cent of illiteracy.

Whatever of illiteracy there is seems limited to a few of the older settlers of foreign origin and to some youth that grew up in comparative poverty in the days of early settlement. In some sections a condition of "near illiteracy" prevails, due to the scattered homesteading west of the Missouri River, with long distance to nearest school, bad roads and severe winters. Conditions like these are found in all pioneer communities. They must be met and remedied through the organization of a new type of school education, quite different from the system that now prevails.

A study of the whole population above 18 years of age—i. e., 340,124 people—discloses the fact that 296,052 persons have had at least an elementary school education; 27,345 have attended high school; 3,178 have attended or have graduated from normal school; 7,371 have had some college education; and 5,006 are college and university graduates.[1]

Wealth of South Dakota: How well it is utilized for educational purposes.—South Dakota is a State of thrifty, well-to-do middle class people; it has few poor people and few of great means. Wealth is equitably distributed. For a comparatively young commonwealth the State makes an excellent showing. In 1915 the assessed valuation of all classes of property reached the great sum of $1,271,573,249, or an average of $2,182.01 for each man, woman, and child in the State. On the basis of estimated actual valuation it would amount to

[1] See Third Census of South Dakota, p. 48.

$4,386.48 per capita. On a fair estimate basis this would amount to $4,970.89 per capita, an increase of $584.41 per capita in two years.

The bank deposits in the State increased from $14,732,983.71 in 1900 and $87,783,967.78 in 1910 to $179,822,797.37 in 1917. There is no better evidence of prosperity than this. In 1917, furthermore, the gross production from all South Dakota farms amounted to $457,350,000, or about $4,355 of gross wealth produced for each farm in the State.

The total resources available for the education of each child in the State, 5 to 18 years of age, is (1917) $11,821. This average amount is exceeded by six States in the Union only. But the State's actual investment in public school education is not so satisfactory. As appears in Table 4, South Dakota ranks as thirteenth among the North Central and Western States in actual school expenditure on

TABLE 4.—*Amount expended on public schools per capita of total population (1915–16)—North Central and Western States only.*

1. Montana	$14.14	*13. South Dakota*	*$8.23*
2. California	10.93	14. Oregon	8.04
3. Arizona	10.44	15. Wyoming	8.01
4. Utah	10.33	16. Ohio	7.89
5. North Dakota	10.25	17. Michigan	7.88
6. Idaho	9.65	18. Colorado	7.83
7. Iowa	9.35	19. Nevada	7.18
8. Minnesota	9.17	20. Illinois	7.15
9. Washington	8.53	21. Wisconsin	6.67
10. Indiana	8.53	22. Missouri	5.21
11. Nebraska	8.51	23. New Mexico	4.86
12. Kansas	8.41	United States	6.28

a per capita basis of the total population, and (Table 5) as nineteenth, on a school population basis. This calculation is based on the 23 North Central and Western States only. The State thus ranks in the lower half of the list. From this it may be concluded

TABLE 5.—*Amount expended on public schools for each child 5 to 18 years of age (1915–16)—North Central and Western States only.*

1. Montana	$65.71	13. Minnesota	$33.87
2. California	56.24	14. Colorado	33.46
3. Nevada	43.73	15. Ohio	33.37
4. Arizona	42.60	16. Michigan	32.03
5. Washington	38.91	17. Kansas	31.79
6. Wyoming	38.81	18. Nebraska	31.37
7. Oregon	36.61	*19. South Dakota*	*29.79*
8. Idaho	36.55	20. Illinois	29.07
9. North Dakota	36.43	21. Wisconsin	24.30
10. Iowa	35.60	22. Missouri	19.97
11. Utah	35.51	23. New Mexico	16.76
12. Indiana	34.13	United States	23.87

that the State has not in the past utilized its great resources for educational investment as fully as most of the States of the Middle West and West. It is fair to assume, finally, that the rich young State will be willing to invest much more in school education in years to come, provided it can be shown that the investment is made in the right type of education.

Chapter II.

FUNDAMENTAL EDUCATIONAL NEEDS OF THE STATE.

The salient facts brought out briefly in the foregoing pages indicate in a general way the educational needs of South Dakota. The State is primarily agricultural. The soil is the foundation and mainstay of its wealth. The three-fourths of the population living on the land are, in the last analysis, the chief wealth makers of the Commonwealth. Their capacity for leadership, their ability to produce scientifically from the land, and their native desire for wholesome, happy living on the land will be determined chiefly by the kind of school education provided by a thoughtful Government.

The population is largely native born, though a majority come of foreign ancestry. They are a heterogeneous people, who have, in addition to their native American traits and traditions, a great inheritance from foreign shores. With fair appreciation and utilization, these double gifts may be expected to produce a Commonwealth of loftiest ideals and successful in material ways. As a whole the people are upstanding and forward-looking, with a fair margin of wealth. Poverty is practically unknown. Most of the farmers own the land they till; tenant farming is not yet, at least, much of a menace. Democratic ideals prevail; ability and thrift are the criteria by which men's worth is measured. Such a people offers the best opportunity for a universal education of high standards, cultural, scientific, and practical. This calls for an efficient system of modern school education. The highest cultural level must be maintained, for without appreciation for the noble and beautiful in life and without ability to think and act for oneself, real democracy is impossible. Similarly, the life and occupations of the people must be made to reflect modern science and business efficiency, if they are to have a happy, wholesome existence in the open country, in town, and in city.

Determining factors in a modern educational system.—An efficient school system, whether in South Dakota or elsewhere, should be planned to enable the people to get the greatest good out of life for themselves and their fellow men. Does the type of education provided keep the people in the enjoyment of good health and sanitary surroundings? Do the schools teach the children and their parents the great responsibilities and opportunities as members of the greater

social group—the community and State? Do they prepare people to earn a good living on the land and in the industrial centers? Do the schools instruct people in such a way that they will dedicate their wealth and leisure to ethical and esthetical pursuits, to improve themselves and help upbuild the community and the race?

This conception of modern education is more comprehensive than the old. The whole farm place with all its many interests becomes an important part of it. The city's industrial activities are utilized. The business man, the bank president, the shop foreman, the practical scientist, the expert accountant, and the housewife are all concerned in this modern education; they are accordingly consulted to help make the school a vital factor in everyday life.

Agricultural life, the great determining factor in South Dakota education.—It is assumed that the three-fourths of the population living under rural conditions are eager to bring about an era of real scientific farming. This kind of farming goes hand in hand with intelligent, educated leadership. To produce such leadership, in good measure, there must be set up in rural districts distinctive community schools in every way equipped to help the rural population to wholesome, joyous living on the land. This kind of school is yet practically unknown in South Dakota.

But the study of agriculture should not be limited to the men who plow, and sow, and reap. Whatever the people who live in the towns and cities of South Dakota accomplish toward success in life is sure to depend largely on the agricultural prosperity with which they are surrounded. In agricultural States one does not always find the bond of sympathy and understanding there should be between town and country people. This operates to the loss of all classes. School education can be of help here also. Secondary schools in incorporated towns and cities should offer practical courses in agriculture, in rural sociology, and farm economics. This would ultimately place agriculture on the high plane which it should occupy in the esteem of all South Dakota people.

Chapter III.

OUTLINE OF THE PRESENT EDUCATIONAL SYSTEM.

This chapter contains a brief statement of the most important phases of the present educational system, and is intended as a basis for the discussion in later chapters of this report. The topics included are: State boards and departments, county supervision, school district organization, the public school system, school maintenance, teaching staff and teacher certification, normal schools and professional preparation of teachers, and higher institutions of learning.

State boards and departments.—Public education in South Dakota is administered through four distinct departments or boards: (1) The State department of public instruction; (2) the State board of regents of education; (3) the State board of charities and corrections; and (4) the State board of education.

(1) *The State department of public instruction* is presided over by a superintendent of public instruction. His administrative functions are defined by the laws of the State. They embrace "general supervision of all the county schools and high schools, and of all the city and county superintendents of the State." This article of the code is comprehensive and would give the State superintendent the requisite power to determine the general outlines of a liberal State administration of public education were it not that he is in other respects limited through statute particularization and hampered for lack of financial support, short office tenure, and party politics.

(2) *The State board of regents of education.*—The control of the higher educational institutions of the State—the university, the college of agriculture, the school of mines, and the four normal schools—is vested in a board of five regents, appointed by the governor and ratified by the senate. The regents of education are a body corporate charged with managing the property of the State schools and with administering their educational affairs. The regents are empowered to delegate provisionally to the presidents and faculties of the schools such of the authority given them by law as they may deem wise. The regents constitute a perpetual body clothed with liberal authority. They are chosen from the prevailing political parties and receive compensation for their services. This board has always upheld the best traditions of the State by attracting to its

service only men of known probity, wisdom, and honor. In practice, unfortunately, there is no link between this important body and the State superintendent of public instruction, who is not even an ex officio member of the regents, although he is by law charged with certificating all graduates of the State schools who expect to become public school teachers.

(3) *The State board of charities and corrections*, as indicated in the name, is charged with management of the State penal and charitable institutions—the penitentiary, the two asylums for the insane, the industrial school, the school for the deaf, and the school for the blind. This board, like the regents, is composed of five members appointed by the governor with the consent of the senate. They are renumerated for their services and hold office for a term of six years. The most important function of this board also is educational. The schools for the deaf and blind are exclusively educational and need most expert supervision; the industrial school likewise is organized to teach wayward boys and girls to become good members of society. Even the penal institution and the asylums for the insane have educational features which demand expert professional attention. In some progressive States the charitable and corrective institutions are placed under the same educational direction as the other educational institutions. As now organized the State board of charities and corrections is not an educational board in the professional sense.

(4) *The State board of education* is of recent origin. It was organized by the last legislature, to comply with the requirements of the Smith-Hughes Act. The State superintendent of public instruction is the ex officio president of the board; the other members are the presidents of the university and the college of agriculture, and four persons appointed by the governor, "two of whom shall be members of a State normal school, one a superintendent or a principal of a city or town school, and one a county superintendent." The term of office is four years. The members of the board receive no remuneration for their services. This board has all the necessary power to cooperate with the Federal Board for Vocational Education in the administration of the powers of the vocational education act.

County supervision.—The county is the unit of school supervision for all except independent school districts, which provide their own local superintendents. The county superintendency is political rather than professional. The superintendent is elected at the regular biennial election for a two-year period and can not by law hold the office more than two consecutive terms. His compensation ranges from $900 to $2,000 per annum, with not to exceed $400 for necessary traveling expenses. In counties having more than 75 schools the superintendent may appoint a deputy or clerk.

The county superintendent is "charged with the general supervision of the schools in his county. In towns having less than 1,000 inhabitants he shall have authority of direct supervision." He visits schools, keeps records of schools and reports the same to the State superintendent annually; he issues special certificates between periods of State examinations, holds teachers' conventions, annual institutes, summer schools, and annual meetings of school trustees; he encourages reading circle work, industrial exhibits, and in sundry other ways promotes education in his county. In practice he has little real authority in guiding the educational interests of the county, the effective unit of administration being in practice the school district and the district board.

School district organization.—The exact number of school districts in the State can not be ascertained, although it is approximately 4,500, with 5,011 one-teacher rural and 287 independent and consolidated schools. In organization the South Dakota districts are unique, ranging, as they do, in size from a single schoolhouse district to a whole county with many schools. Each unorganized county constitutes a single school district; organized counties are divided into school districts along township lines, i. e., into township districts of one or more congressional townships; and township districts are subdivided into smaller local districts whenever there is a popular demand for such subdivision. A number of counties have been subdivided into these ineffective, small one-school districts; others are wholly organized as township districts; and still others have a mixture of small districts and township districts. As now organized, none of these organizations is wholly satisfactory, as will appear in a later chapter.

Every school district, not an independent district, is administered by a board of three members, elected at the annual school meeting, who hold office for three years. This small board manages all local school matters within certain legal limitations and under instructions from the annual school meeting. The boards employ teachers, determine the length of the school year, and prescribe what subjects may be taught in addition to those determined by law—in a word, they have full charge of the school, and on their ability as administrators depends the success or failure of the county schools.

All cities, towns, and adjacent territory are organized as independent districts and are governed under special legislative provisions. Such districts are administered by larger boards of education and have, for the most part, their own superintendents of schools.

The public school system.—South Dakota has a free school system of 16 years or more, embracing 8 years in elementary school, 4 years in secondary school, and 4 or more years in the University of South Dakota, or courses of varying length in the State College of Agri-

culture and Mechanic Arts, the State School of Mines, and the State normal schools.

The 5,298 rural schools are practically all elementary schools, 86,785 of their pupils attending the grades, with only 2,057 in high school. In independent districts there are 35,827 pupils in elementary schools and 9,467 in high schools. A large majority of rural children of secondary school age either do not obtain high-school instruction at all, or they are obliged to attend town schools. Township high schools may be organized under law, open to all children of school age in the school township; but very little advantage has been taken of this opportunity to establish secondary schools within reach of all children.

Some progress has been made recently in the reorganization of the 12-year school plan. A number of the larger towns and cities have begun to plan the schools on the "six-and-six" plan and are making good strides in organizing junior and senior high schools.

School maintenance.—The public schools draw their support from several sources. The most important of these is local taxes, levied on all taxable property within the school districts. In 1916, 76.14 per cent of all school revenues expended during the year came from local taxes. The income on the State permanent fund of nearly $14,000,000 is a second source of revenue. This produces a considerable portion of the school maintenance. Certain other sources—to be defined in later sections—produce the balance of the school revenue. In 1916, 17.85 per cent of the total public school maintenance came from the State permanent fund, and 6.01 per cent from "other sources."

The State's higher educational institutions are supported by direct legislative appropriations, from the income on endowment lands held in trust by the State, and in case of certain of the institutions, from Federal appropriations.

South Dakota levies no regular State tax for the public schools; nor does the State levy a permanent millage tax as a permanent endowment for its higher educational institutions.

Teaching staff and teacher certification.—It requires more than 7,000 teachers to fill the teaching positions in the public elementary and secondary schools of the State. Of this number 5,374 are needed (1916) in "common" school districts and 1,683 in independent districts. The teaching staff varies in academic and professional preparation from practically no preparation at all to college and university graduation, together with good training preparation in normal school or school of education. Public education in the State suffers, as is true of many other States, because the schools are manned largely by immature persons of meager preparation and limited professional outlook. Conditions which were bad enough

before the war have become accentuated in recent months, and now call for serious consideration by lawmakers and parents.

Teacher certification, in this State, is controlled through the State department of education, which has charge of the examinations, grades the papers, and issues the certificates. The only exception to this rule is in case of the so-called special certificates issued by county superintendents to candidates "who present proof that they were unable to be present at the last regular public examination." Such certificates are valid only until the next regular examination is held.

Professional preparation of teachers.—The State maintains normal schools at Aberdeen, Madison, Spearfish, and Springfield, which supply about 450 teachers[1] annually for the public schools of the State. The school of education in the university and the department of education in the State college prepare about 25[1] annually. Accredited denominational colleges furnish another 200,[1] which makes the annual output from all these schools 675.[1] The annual wastage in the teaching profession is, however, so large that other States and sources must be drawn upon to supply large numbers to fill vacancies.

There can be no real professionalizing the profession before all teachers are required by law to complete courses in the normal schools or other professional institutions. This will require the normal schools to enlarge their output greatly, or that the efforts of the normal schools be supplemented by teacher training in high schools or from other sources.

Higher institutions of learning.—South Dakota supports three higher educational institutions, not including the normal schools. They are the University of South Dakota, at Vermillion; the State College of Agriculture and Mechanic Arts, at Brookings; and the State School of Mines, at Rapid City. Unfortunately all these schools are situated on or near the borders of the State, and are not easily accessible.

There are in the State also a number of well-established denominational colleges and academies that have done great service in the State during its formative period. Many of the colleges are fully accredited by the State department of education, with legal authority to grant teachers' certificates. The following are on the accredited list: Augustana College, at Canton; Dakota Wesleyan University, at Mitchell; Huron College, at Huron; Yankton College, at Yankton; Lutheran Normal School, at Sioux Falls; Sioux Falls College, at Sioux Falls; and Wessington Springs Junior College, at Wessington Springs. The following academies are accredited to grant lower grade certificates: Notre Dame Academy, at Mitchell; and Ward Academy, at Academy.

[1] This includes graduates only.

Chapter IV.

GENERAL STATE ADMINISTRATION OF EDUCATION.

The superintendent of public instruction is the chief educational official in most of our States. He is charged with enforcing the educational law in spirit and in fact; he is the professional adviser of the supervisory and instructional staff of the State. In a word, he organizes and directs the educational forces within his State. The State superintendency is a big man's or a big woman's job. It is hard to conceive of a more important office, or a more difficult position, if one takes into consideration the legal and other limitations usually met with in the average western Commonwealth. At all times it calls for a person of great tact, good initiative, and much executive ability.

The State superintendency in South Dakota weakened by legal limitations.—In this State the office of superintendent is limited in its administrative efficiency by constitutional and legal provisions. The office is not popularly considered the highly important position that it is. It is a political office; the salary is limited by the constitution to $1,800 per annum; and the term of office, while not fixed by law, is limited by custom to four and, occasionally, to six years.

To leave this professional office to the caprice of party politics is, to say the least, unwise. Many of the strongest professional educators would not care to enter a contest for the office, if for no other reason, because an election is not always determined by professional fitness, but often by aptness in vote-getting. The superintendency should be removed from politics and be made appointive.

Moreover, the short term of service keeps many from seeking the office. Progress in education requires a continuous policy, not limited by short tenure or subject to the accidents of politics. The office should be held subject to good behavior, and the incumbent should be removed for good cause only.

The salary is limited by the constitution to $1,800 per annum. Fifty dollars per month is added to this sum to pay house rent, provided the superintendent makes the State capital his home. No other State in the Union, save one comparatively poor Southern State, pays such a beggarly salary. The office can not expect to attract really strong men until it pays a salary commensurate with the importance and dignity of the office. Certainly, the State super-

intendent should be remunerated at least as well as the heads of the State's higher educational institutions and the leading city superintendents, which is now far from being the case.

Again, the constitution and laws are silent on the matter of the superintendent's educational qualifications. Every teacher in the service and every supervising official in city and county must have certain legally prescribed qualifications. It is assumed, of course, that the State superintendent will be a well-prepared educator; but this has not always been so.

Other States and permanent professional superintendencies.—In 16 States the head of the State school system is appointive. In most of these States there are no limitations in regard to previous residence of the superintendents, who are appointed solely for their professional worth from the country at large. This practice has long been followed in the important city superintendencies in the State, and should, likewise, be followed in filling the more important office of State superintendent.

Two different plans are pursued in selecting the heads of State educational systems. The governor may appoint them, or they may be appointed by State boards of education. Of these two methods the latter is the more satisfactory. Where the selection is left to the governor there is at least the old danger of continuing the office in politics. On the other hand, if chosen by a nonpolitical State board of education, these difficulties would be overcome (see page 23). The first appointment might be probational, for a term sufficiently long to demonstrate the official's fitness for the place. Reappointment should be for an indefinite term, the State board retaining the right to remove the incumbent from office for misfeasance or malfeasance. Under such a permanent organization the State superintendent could raise the State school system to a high point of administrative efficiency.

It is further suggestive that the States which have organized their State departments of education on a professional basis pay better salaries than the elective States do. The following are a few of the States which place a premium on scholarship, experience, and general fitness by appointing their superintendents, and the salaries paid: New York, $10,000; New Jersey, $10,000; Massachusetts, $6,500; Vermont, $5,000; Rhode Island, $5,000; Pennsylvania, $5,000; Minnesota, $4,500; and Ohio, $4,000.

Organization of the State department of public instruction.—The law charges the State superintendent with supervision of the State's elementary and secondary schools. He has great supervisory and inspectorial duties. The county schools and county superintendents are nominally under his direction; the same is true of city and town schools and their superintendents, and other independent school dis-

tricts. He examines all persons who desire to teach in the public schools, and validates certificates issued by other States; he gives instruction and advice to institute directors, and helps manage the State reading circle. He is president of the State free library commission, and ex officio president of the new State board of education. He prepares and presents a biennial report to the governor; he has a voluminous correspondence covering interpretation of school law, appeals by teachers, school boards, and superintendents. So many and so varied are these duties and responsibilities that unless the superintendent has a large well organized "inside" and "outside" staff, there can be little time or energy left in which to plan and push progressive school legislation. It is well for the State to realize that it avails little to charge the superintendent of public instruction with supervisory, inspectorial, judicial, administrative, and similar duties, unless he is provided with an adequate force of helpers who can form the necessary trained organization through which to exercise the will of the State.

Now what are the facts in regard to the organization of the State superintendent's office in South Dakota? The total office force at the present time consists of a deputy State superintendent, two clerks, and one stenographer. The cost of maintaining this office during the biennium 1914–1916 was as follows:

Item.	1915	1916
State superintendent's salary	[1] $1,800	[1] $1,800
Salary of deputy and stenographer	2,440	2,440
Two clerks	2,400	2,400
Office expense, supplies, and incidentals	4,715	4,799
Traveling expense of superintendent and deputy	522	801
Total	11,877	12,240

The State superintendent receives, in addition to this, $50 per month for house rent.

The State maintains no specialized educational staff to carry out the requirements of the law. The State superintendent and his deputy spend as much time as they can spare in field work. But no real forward-looking educational policies can be realized under these conditions. While they are devoting their energies to field work, office tasks accumulate, requiring overtime and long hours to clear up the accumulations. The department has no State high-school inspector (the deputy superintendent gives what time he can spare to this office); it has no elementary school inspector; and no supervisor for consolidated and other rural schools. This department organization is wholly inadequate for a State of South Dakota's size and wealth. It is probably true that for its size and population South Dakota has a smaller staff in its superintendent's office than has any other State in the Union.

A larger conception of the State department of public instruction.—The public conception of the functions of the old State superintendency has undergone marked changes in recent years. The public is beginning to realize that this office—under whatever name it may have—must be de facto head of the entire State system of schools, not alone the elementary and secondary schools, but as well of all higher educational institutions and specialized phases of education. The State has unquestionably suffered great educational loss because its State department of public instruction has been limited by reason of poor financial support in the main to the mechanical side of school administration. In justice to the present superintendent and his staff it should be said, however, that the work is efficiently done, so far as it can be done at all with the present small staff. But no important constructive educational policy has yet been initiated, including the various educational agencies in the State. Under prevailing laws and with the present meager legislative appropriations little can be done toward centralizing the professional leadership in the State superintendent's office. In fact, a comprehensive reorganization of the department is highly desirable, to make it part of the proposed system of State-wide school administration outlined in Chapter V.

The State board of regents of education is organized under a constitutional provision (art. 14, par. 3), which reads:

> The State university, the agricultural college, the normal schools and all other educational institutions that may be sustained either wholly or in part by the State shall be under control of a board of five members appointed by the governor and affirmed by the senate under such rules and restrictions as the legislature shall provide.

The political code makes specific provision for the selection, term of office, continuation in office, powers, duties, etc., of the board of regents. Their term of office is six years; vacancies are filled by the governor. They must be persons of "probity and wisdom and selected from among the best-known citizens, residents of the different portions of the State, none of whom shall reside in the counties in which any of the State educational institutions are located." The traditions of the board of regents are enviable, as exceptionally strong men have invariably held this important trust. The portion of the section placing limitations on the place of residence of members is a wise provision, as it removes the possibility of local pressure and other ulterior influence.

The board of regents elect a president from among their own members, and a paid secretary and stenographer who shall not be chosen from among the members. They hold two regular meetings annually and as many special meetings as they may deem necessary. The regents are each paid an annual salary of $1,000.

The functions, powers, and duties of the regents are many. They have full control of the affairs of the university, the college of agriculture, the school of mines, and the four normal schools. They are a board of laymen comprising the best business ability of the State, well fitted to give the higher educational institutions a good business administration. On the other hand, many of their prescribed functions are purely professional, requiring the interpretation of the educational expert. This means that many important tasks of a professional nature must at the present be left for final determination with the presidents and faculties of the said institutions. This is in a measure wise. But a better plan would probably be to make the professional State superintendent an ex-officio member of the board of regents (see p. 25), to represent the professional policies of the regents before the presidents and faculties, at the same time that he represents the interests of the public schools of the State in these higher institutions. At the risk of repetition it may be stated here that no real educational link, at the present time, binds intimately the head of the State's public schools and the heads of the State's higher educational institutions. This has led to considerable embarrassment and some misunderstanding, and much loss of efficiency. How this may be remedied is explained in the next chapter.

The State board of charities and corrections is a purely lay board. At present it is composed of business and professional men of good ability, but without the special qualifications required to administer successfully important educational institutions. This board has complete management of the State penitentiary, the two asylums for the insane, the training school for boys and girls, the school for the deaf, and the school for the blind. The board of charities is appointed and organized on the same plan as is the board of regents. The members each receive an annual compensation of $1,500 and necessary expenses. But in functions and duties this board differs materially from the former. The regents administer a group of purely educational institutions. The board of charities have control of two schools that are wholly educational—the schools for the deaf and the blind; of one which is both educational and corrective—the training school for boys and girls; of two which may be classed as charitable; and of one which is penal and corrective.

The State board of charities and corrections should be continued as at present, but the three above-mentioned educational institutions should be placed under the jurisdiction of a board organized to care for educational institutions to make the schools more effective than now. (See p. 24.) Details of this proposed reorganization are explained in the next chapter.

Chapter V.

IMPROVEMENT IN STATE SCHOOL ADMINISTRATION.

The last few years have brought about a great change in the place and importance of public school education in the United States. This enlarged conception of education has added new importance to the chief educational office in the State—the State department of public instruction. The office as originally created in the older States was chiefly clerical and statistical, much akin to the now passing ideas of the functions of a middle-western county superintendency. Almost any person chosen from the general electorate could fill the place to the satisfaction of the public.

But the demands of to-day require a new type of educational leadership, able to master the manifold problems of modern school organization and administration, general instruction, school sanitation, industrial and vocational education, interrelation of the public and higher schools and educational legislation.

The State in new educational leadership.—The great problem in South Dakota is how best to manage the State's growing educational business; how best to create an educational organization strong enough to do the work efficiently and economically, and in a large constructive way. The present State department of public instruction was organized when the more limited conception of school education prevailed. The great problem now confronting the State is how best to reorganize its educational administration, how to centralize it for greater effectiveness in capable hands, without taking away from the smaller educational units their local initiative and administrative efficiency.

The survey committee is convinced that the needed reorganization can best be brought about by enlarging the powers of the present State board of regents of education and give it central control of the educational affairs in the State. The enlarged board should retain all its present powers and duties, and in addition thereto have general oversight of the public elementary and secondary schools, the schools for the deaf and the blind, and the training school for boys and girls, and, finally, to absorb the functions of the State board of education

created to meet the requirements of the Smith-Hughes Act. The State board of charities could continue as a State board to administer the State asylums for the insane and the State penitentiary.

Enlarged State board of regents of education.—The enlarged board should be primarily a lay board, representing the larger educational policies of the public, delegating the professional side of education and the administration of their general policies to their appointive executive officials, the State superintendent of public instruction, and the presidents of the higher educational institutions. The board should be composed of eight members to be appointed by the governor, by and with the consent of the senate, the term of office to be eight years, not more than two members to retire each biennium, thus perpetuating the board's continuance and making it permanent. Vacancies should be filled by the governor as at present. The same care should be exercised in selecting the members as in the case of the present board of regents. The appointment should be for absolute worth and regardless of residence—provided that no regent be chosen from the county in which a higher institution of learning is situated—occupation, party affiliation, religion, or sex. The members should serve without remuneration, except actual traveling and other necessary expenses.

The general powers and duties of the enlarged State board of regents of education should be:

(1) To retain and continue the powers and duties now held under law for the administration of the State university, the State college, the school of mines and the State normal schools.

(2) To have general oversight and control of the public-school system of the State.

(3) To select a State superintendent of public instruction, to be the executive official of the board.

(4) To require uniform records and reports, in form to be prescribed by the superintendent of public instruction, from all educational institutions supported by the State, and from all other organizations doing educational work receiving State accreditment and recognition.

(5) To classify and standardize, under the direction of the State superintendent, the public schools of the State.

(6) To prescribe the standards and courses of study for the State normal schools, the educational departments of the denominational colleges and academies accredited under State law, and such other teacher-training institutions as may be established by law.

(7) To adopt rules and regulations for the sanitary inspection of schools and for the physical examination of school children; and, in conjunction with other State authorities, to see that the rules relat-

ing to school health, compulsory education, and child conservation be enforced.

(8) To have general control of the schools for the deaf and the blind and the industrial school for boys and girls.

(9) To act as a board of control for the State library and the State historical collections.

(10) To transmit to the governor and the State legislature a biennial report covering all the activities of the university, the State colleges, and of the State department of public instruction in its relation to all public elementary and secondary schools and the above-mentioned higher educational institutions of the State.

(11) To perform such other duties and functions as are prescribed by law.

The State superintendent of public instruction.—Under this proposed reorganization the superintendent of public instruction would become the executive official of the State board of education to carry out in detail the educational policies of this board. He should be appointed by the State board for professional ability and successful educational experience, regardless of residence or party affiliation. After a probational service to prove his ability, he should be reappointed for an indefinite term of years. His salary should be commensurate with the importance of the office and in keeping with what is being paid for this service by the most progressive States in which this official is appointive.

(1) The State superintendent of public instruction should be the executive official of the State board of regents of education and executive head of the State department of education, and should enforce all the rules and regulations made in conformity to law by the State board for the public elementary and secondary schools.

(2) He should have supervision of all the different divisions of the State department of education and should be held responsible by the State board for the proper administration of the duties of each such subdivision.

(3) He should, in cooperation with the heads of the State's teacher training institutions and in conformity with law, prescribe courses of study for these training schools, methods and standards for the certification of teachers and validation of teaching credentials from other states.

(4) He should personally direct all educational activities wherein the State department of education, under law, cooperates with the presidents and faculties of the higher educational institutions of the State.

(5) He should have such other powers as under law belong to the office of superintendent of public instruction.

The State department of education.—As may be seen from the following illustration (Figure 3), the reorganized State department of education is comprehensively planned on lines of approved business principles. The most important business in South Dakota is education. Its State school administration should no longer be obliged to continue the present haphazard, cheap way. If the State is to get full returns on its great educational investment, the methods, ways, and means utilized must be of the most approved known to experts in school administration.

The proposed department outlined above is organized into administrative divisions, each in charge of an expert in his particular edu-

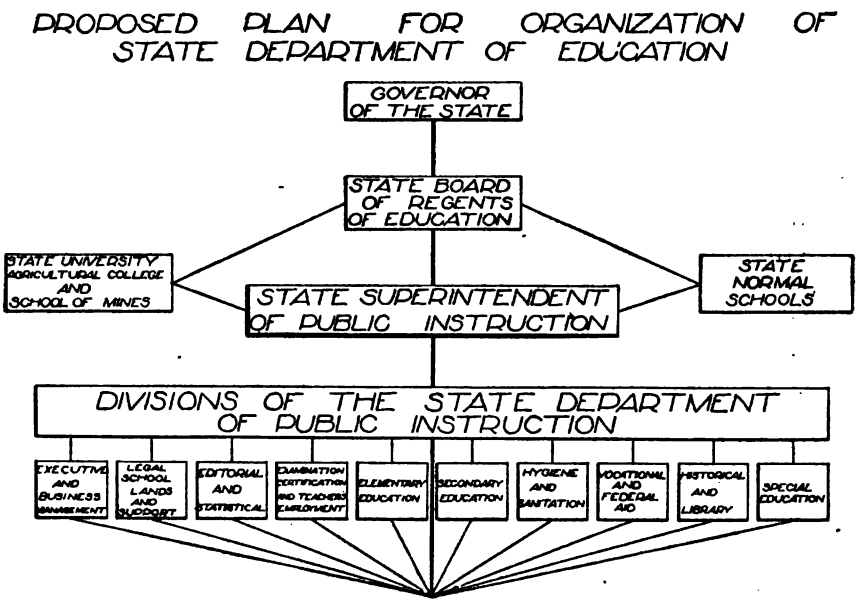

FIG. 3.

cational field. It is proposed that all such divisions be organized at once, although several may be combined under one head until additional staff officers are required by the increased volume of work.

The executive division should have charge of the business management of the department and keep all the books and records of the State board of regents of education. The head of this division could act as secretary for the State board of regents of education. He might also apportion the State school funds, under the direction of the State superintendent.

The legal school lands and maintenance division might, for the present, remain in personal charge of the superintendent of public instruction. This division should edit and annotate the school code—an important task at the present left to publishing houses through-

out the State. The superintendent has the power under law to interpret the school code and decide matters of controversy arising under it.

The elementary education division should have charge of educational measures in open country districts and in places of less than 1,000 population. It should study the means for improvement of the schools aforesaid and through field propaganda and in other ways be of assistance to school patrons; it should especially devote its energies to school consolidation, to introduction of agricultural instruction, home economics, manual training, etc.

The secondary school division should classify and accredit the high schools of the State, and inspect them from time to time to see that they comply with State requirements.

The vocational education division would do the work of the State board of education which was recently organized to accept the benefits of the Smith-Hughes Vocational Education Act.

The hygiene and sanitation division should be intrusted with the enforcement of legislation on school hygiene and sanitation. It would have charge of the health inspection of school children, and prepare and sanction plans and specifications of all public-school buildings to be constructed in the State.

The historical and library division should be directed by the present State historian and should include the present State historical collections and State museum and the State library.

The special education division should be intrusted with all correctional education, with instruction of the deaf and blind, and of subnormal children, which work would be done under the immediate direction of the superintendent of public instruction.

Steps in the reorganization.—To the end of consummating the reorganization proposed in this chapter and other changes outlined in later chapters the survey committee recommends:

(1) A constitutional amendment to enlarge the powers and duties of the State board of regents of education.

(2) A constitutional amendment providing that the legislature determine the method of selecting the State superintendent of public instruction and county superintendents of schools, and fixing their qualifications, compensation, tenure, salaries, and powers and duties.

(3) A constitutional amendment to place the State Training School, the State School for the Deaf, and the State School for the Blind under the control of the State board of regents of education.

Chapter VI.

LOCAL SCHOOL ORGANIZATION AND ADMINISTRATION.

Present tendency in school district organization.—The State is subdivided for local administration of education into school districts which, in organized counties, vary in size from a few square miles supporting a single school to several townships supporting many schools. In this particular the school organization of South Dakota is quite unique, as in most other States only a single type of school district organization prevails.

The code under which public school districts are organized provides (Art. III, Sec. 68) that "townships shall be made the boundary lines of the districts." Again, that the county commissioners "may, at their discretion, when for the best interests of the schools, organize one or more congressional townships into one school district." Provision is also, unfortunately, made for further divisions of these one or more township districts into smaller districts at the pleasure of the patrons concerned. (Art. III, Sec. 69.) At the present time the tendency is toward smaller and smaller units of organization for local support and school administration.

A study of South Dakota's educational map shows that the one unorganized county, Todd, forms (Art. III, Sec. 68) a single county-wide school district; that many of the newer, sparsely-peopled counties west of the Missouri River are divided into school districts containing one to five or even more congressional townships. East of the river some counties have retained the township district intact; others have a mixture of township and single school districts; while still others contain only the small local districts.

History of school district organization.—It is important to determine the effect of this gradual disintegration of the large school districts into smaller and smaller areas on the economy and efficiency of the schools. Are these small districts suitable units of administration for a great agricultural State seeking in its schools effective preparation for agricultural life? Are they conducive to the organization of larger, effective schools of elementary and secondary type? Or do they tend to perpetuate the pioneer system of three R's schools? The queries can best be answered after making a brief statement of the evolution of school district organization elsewhere.

The local schoolhouse district originated in New England in the early days of English colonization, whence it spread westward wherever the settlers penetrated the wilderness. It was purely a community enterprise, each group of families organizing and supporting its own school as best it could. The district organization usually preceded school legislation, which later sanctioned it as the only practicable organization for the settlement.

Throughout the United States people have begun to realize that the small district has about outlived its period of usefulness, and that it ought to be supplanted by a more effective unit of organization. In New England the more compact township organization has already driven out these local districts. The same is true in Pennsylvania, Indiana, and other States in the Middle West. The Southern States generally are organized under the county unit, with one board of trustees for all the schools in a single county. Eighteen States have already adopted the county unit in one form or another, and 13 are using township organization in whole or in part. In all the rest there is a strong movement under way to supplant the pioneer district with one or the other of township or county organization, with the latter generally in the ascendency.

The chief reason for discontent with the local district is that it has become an almost insurmountable obstacle to the type of school organization required by a modern rural population. As a tax area it causes untold injustice and inequality. School consolidation and the maintenance of rural high schools have proved exceedingly difficult where local boards and district lines have to be considered. Finally, local jealousy and closefistedness and individual indifference have often resulted in short terms and underpaid teachers, a meager course of study with the usual results—non-enrollment of a large proportion of the school population, irregularity of attendance, and early dropping out of school.

Local administrative units.—This State has not in every respect followed the natural trend of local administration outlined above—i. e., beginning with the small district and later turning from it to something more practicable for an up-to-date agricultural commonwealth. The first territorial superintendent of schools, Gen. W. H. H. Beadle, himself reared under the township system in Indiana, anticipated the organization of small districts by having the present township system included in the code. However, the great mistake made in this State was to give the township unit the same kind of school administration as in the one-school district. In this respect the South Dakota township district differs from that of Indiana, which may explain the doubtful success of the unit in South Dakota.

The evolution in local administration in the State, as it appears to the casual student, may finally be summarized thus: The large un-

organized county forms a single county district under control of the governor. In the organized counties the settled portions are divided by the county commissioners into township districts of one or more congressional townships. In the older settled counties these large township units are disintegrating into small one-school districts (1) because of immoderate desire to have the school as near one's own home as possible, or (2) because the administration of the larger districts has occasionally proved unsatisfactory in practice. A reaction is beginning to set in against the small districts; but usually this does not take place until after the community has suffered from all the inherent weaknesses that belong to the small, helpless district. Consolidation of small districts is finally being resorted to as the ultimate solution of a very difficult problem.

The township district is managed by a school board of three members, who have complete control of all the schools within the district. If the district happens to contain three or four schoolhouses, educational advantages are usually fairly equalized among them; but if they have more than three schools, some of these are likely to be neglected. The explanation is not far to seek; the three board members are usually distributed over the district so that each member lives near his own school. In the board meeting he is inclined to use his influence to the end that this school gets "what is coming to it," to the serious loss of the unrepresented schools. Because of this the unrepresented portions of the large districts are prone to start a movement to organize small districts of their own. This statement is not meant as a condemnation of all township districts, as the committee found many well-administered township districts. The township organization is assuredly preferable to the local district; but neither seems adequate to present needs.

The study of the prevailing school districts has disclosed that:

1. *Small school boards are ineffective and impracticable.*—South Dakota has approximately 4,500 school districts, each in charge of three local trustees. This makes a small army of about 13,500 men. A well-settled county has from 50 to 300 or more trustees. Such an organization is inexcusable. It is unreasonable to expect that half a hundred men can be found in an ordinary county suited by temperament and training to fill all these positions. Even if the men could be found, there is neither business reason nor educational reason for bringing such a large force into the management of the schools.

2. *Board members often misdirect their efforts.*—Many board members give their time freely to the schools, and in some instances to good purpose. But, generally, their efforts spent are misdirected because they lack knowledge of educational needs.

3. *Inequality of school support.*—Wealthy districts are sometimes controlled by men whose chief aim is to keep taxes down. In neigh-

boring districts, with smaller aggregate wealth, it may happen that the school plant is modern and satisfactory because the men there tax the community to the limit.

On general principles the whole wealth of the State should be made available for educating all the youth of the State. This is both right and just, for education is a State function, to be supported like other similar functions. While it is the conviction of the survey committee that the State should levy a State tax for school purposes (see p. 55), the same principle should be applied to the county. The school district has proved too small to be intrusted with final legislation in such matters as taxation. Taxation for general educational purposes should be vested in the larger natural unit of civil administration—the county.

4. *Selection of teachers.*—Teachers are chosen by the local boards, who do much as they please in these matters. Some counties which have superintendents of exceptional personality allow these educators a free hand in placing teachers, but this condition is unfortunately exceptional. The prevailing practice of selecting teachers by local boards has led to serious abuses that need not be mentioned here. Suffice it to reassert that the average school board in rural districts is unable to choose teachers wisely. This duty should be vested in some educational authority in closer touch with the teachers and with the schools that are training the teachers.

5. *Small districts are unable to meet modern community needs.*—The small one-teacher district does not have within its boundaries what is necessary to make a modern community school (see p. 71). The district school in South Dakota devotes its energies to the tool subjects almost wholly. Few pupils complete the prescribed course of study. The schools are not organized to attract and hold the larger boys and girls, and most of the schools are unable to provide the social aspects required of modern education. The small one-teacher district is unquestionably responsible for the following fundamental weaknesses from which all are suffering: Nonattendance of a large per cent of the school population; irregularity of attendance; and great wastage in attendance due to lack of interest in prescribed school work.

Proposed plan of school district reorganization.—The survey committee recommends the following reorganization of existing common school districts in the State:

1. Legal disestablishment of all common school districts as now organized in all counties with a school population of more than 2,000 children of school age outside of present independent districts,[1] and the establishment in lieu thereof of the county as a single school dis-

[1] Or in lieu thereof a certain number of persons of school age per square mile in the county to be determined by law.

trict; permissive disestablishment of similar districts in all other counties, and their reestablishment as single county districts.

2. Election of a county board of education for each county in the State to supplant the present district boards in all counties organized on the county-district plan and to have such powers and duties in all other counties as are set forth in Chapter VII.

The recommendations explained.—The first recommendation provides for an effective plan of school organization. The "county unit organization," by which name it is commonly known, has proved the most satisfactory of all forms of organization, wherever it has been properly safeguarded. In one or two States it is not satisfactory, because under it the people have been deprived of all the rights they formerly had. This is not true of the plan proposed for South Dakota in the present and the following chapter.

1. Under the proposed plan the members of the county board are elected by the people from among the leading men and women of the county. This allows the people to retain the reins of government in a large way.

2. In all counties reorganized under the county-unit plan each school community will be represented before the county board by one subdirector. (See Chapter VII.) This is really more than is true of some schools under the present system, as the schools in township districts of more than three schools are often grossly neglected if a board member does not live near such school. This is of course not invariably true, but altogether too often.

3. Under the county plan the county will become the unit of taxation, which is eminently fair; but this is not done to the exclusion of local tax rights. For extraordinary purposes the school community retains the right to levy taxes and issue bonds. (See Chapter IX.)

4. The most vital phase of the whole problem is just where to draw the line between counties to be classed under "compulsory" and "permissive" county unit. This form of government operates most satisfactorily in well-settled counties. Judged by the experience elsewhere 2,000 children of school age should be the minimum measure for a congressional county of 16 townships, or about three and one-half persons per square mile. A basis of not less than *three and one-half persons of school age per square mile* would probably prove more satisfactory than the flat minimum of 2,000 persons of school age, as the latter would exclude some of the small but well-populated counties, and include several of the large but sparsely settled counties.

Chapter VII.

COUNTY ADMINISTRATION AND SUPERVISION.

For the greatest administrative efficiency in education the unit of administration should conform geographically to the unit used for civil administration. In South Dakota the county is the civil administrative unit; it is also the legal unit for supervision of schools. But the legal school districts administer all matters of vital importance in public-school education. While local school administration is, in theory at least, the most democratic, it has proved in practice both wasteful and inefficient.

The present chapter deals with two important factors in county school organization: (1) The present county superintendency; and (2) a more practicable county system of administration and supervision.

The South Dakota county superintendency.—In this State county superintendents have charge of the professional management of all schools in villages of less than 1,000 population and in the open-country districts. This means that county superintendents are charged with the supervision of 5,205 schools in a total of 5,492, and 88,842 pupils enrolled in a total of 134,136 pupils. The office is elective and political. The term of office is two years, and no superintendent may hold office for more than two consecutive terms. To be eligible for the office, the candidate must be "the holder of a regular first-grade certificate or a certificate of higher grade valid in the State." The minimum salary prescribed by law is $900 per annum and the maximum $2,000. An amount not to exceed $400 per annum is allowed for necessary traveling expenses.

The law provides that the board of county commissioners may, when in their judgment it shall be necessary, authorize the county superintendents of counties having more than 75 schools to appoint deputy superintendents during such time and at such salary or compensation as said board of commissioners may determine. This means, in practice, that a deputy superintendent may or may not be appointed, according as the county commissioners are or are not interested in educational matters.

The powers and duties conferred on the county superintendent do not make this official the leader he should be in county educational

matters. He is by law "charged with the general supervision of the schools of his county. In towns having less than 1,000 inhabitants he shall have authority to direct supervision." The superintendent's specific duties are to visit each school in his county as frequently as possible; to supervise the teaching process; to inspect grounds, buildings, etc.; to keep a complete record of his acts, and a register of all the teachers employed; to make annual and special reports to the State superintendent; to encourage and hold annual teachers' institutes and occasional teachers' associations; to encourage higher standards of teaching and employment of better teachers; to encourage reading circles; and to conduct annual contests in agriculture, industrial arts, and home economics.

Who the South Dakota county superintendents are.—Members of the survey committee met the county superintendents in groups at called meetings or saw them as individuals at work in their counties. There are many strong, well-prepared men and women among them, but also some who could never obtain the office of a county superintendent were it not for the ups and downs of party politics.

The following data are gleaned from questionnaires answered by each of the county superintendents in the State, a detailed tabulation of which appears in the appendix of this bulletin.

1. *Tenure.*—There are 64 superintendents, of whom 36 are women. Thirty superintendents have held office one year only, and one superintendent alone is in her ninth year (having begun a third term, though the terms have not been successive). In other words, there is absolutely no permanency in this important office. The State law makes the office a political plum to be passed around with the rest of the lay offices of the county, when in fact it is a professional office of the highest importance, to be held for an indefinite tenure by professional educators only.

2. *Age.*—The average age of the present incumbents is 38.68 years for men and 35.54 years for women; the median ages are respectively 37 and 33 years.

3. *Salaries.*—The amount paid for county superintendents' salaries during the past year was $87,565.08. The travel allowance varied from $85 to the legal maximum of $400 per annum. Forty-three of the county superintendents reported the maximum allowance. The average annual salary of the county superintendents was $1,368.23, the average total expense for the office, $2,400.05. The total expenditure for maintenance of the office, including salaries for deputies and clerks, was $153,603.22. Four counties, Brown, Day, Pennington, and Perkins, have deputies with salaries placed respectively at $1,020, $780, $1,000, and $850. Thirty-seven counties reported clerical help, 25 being for full time and 12 for part time. The salaries paid these helpers varied from $3 per day to $900 per annum.

4. *Education.*—Fifty-two superintendents reported high-school attendance—28 having completed four-year courses; 11 have had three years' work in high school; 13, two years or less; while 12 have had no high-school education at all.

Forty-eight superintendents have had additional preparation—25 in university or college, and 23 in normal schools. Twelve hold degrees from college or university; of these, 4 have the degree of A. B.; 3 the degree of B. S.; 2, M. A.; 1, Ph. G.; 1 B. L.; and 1 M. E. Of the 23 who have had professional preparation, 8 have had three years or more; 12, two years or more; and 3, less than two years.

Twelve superintendents have had high-school courses only; 7 have attended high school and college; 14, high school and normal school; 5, high school and university; 7, college and normal school; and 3, high school, college, and university.

5. *Time devoted to classroom supervision.*—Eight superintendents reported devoting one-half of their time to classroom supervision; 8 gave one-third of their time; 11, one-fourth; 21, one-sixth; 12, one-tenth; and the rest none. Sixteen of the 64 reported just enough time to classroom practice to meet the requirements of the law.

It appears from the above that the office tenure is too short to make possible the initiation and prosecution of concerted, well-organized policies to upbuild the schools. No sooner has a superintendent got big plans under way than he must yield to a successor, who, likely as not, is pledged to some other policy. To remove the office from party politics and make its tenure indefinite is the only sure way to make the superintendent the chief educational official of the county as he should be.

The salaries are insufficient to attract well-prepared, experienced men and women to the office. Many superintendents receive only the minimum of $900. At all times, but particularly in these war times, such an allowance is scarcely enough to hold body and soul together, to say nothing about using a part of the income for professional improvement.

The academic and professional qualifications required to qualify for the office are too low. Only educators of long successful experience, holding college or university degrees, or advanced-course normal-school diplomas and State certificates or life diplomas should be eligible.

The superintendent should finally have an adequate working staff to aid him in giving the county an efficient system of administration and supervision such as the law assumes that he gives.

Increasing importance of the county superintendency.—The first county superintendencies in the United States were organized to administer and apportion the school funds, to keep records of school population and attendance, to enforce the school laws, and in other ways carry out the will of the people. These duties did not require

any particular qualities or training; therefore, the positions could be filled in the same way as other civil offices in the county, through seasonal election by the general electorate.

The rapid changes in rural life have thrust new responsibilities on the county superintendent as well as on his teachers. He still retains the clerical and financial duties given the office at the time of its founding. The instructional work in the schools has grown vastly in scope and importance and should receive much of his time. The improvement of teaching staffs by means of reading-circle work, institutes, and teachers' associations is another new task falling to him. He should, finally, be a rural and agricultural expert who can inspire, guide, and assist in organization for rural leadership.

Such a multiplicity of school work is quite beyond the abilities of a person chosen merely for clerical aptness from the general electorate. It demands, in a word, a good organizer, a person of exceptional business ability, a professional supervisor with good ability to assist his teachers, a person of unlimited energy and the courage of his convictions.

A proposed county system of education.—The important position of chief county educational officer in South Dakota can, in the conviction of the survey committee, best attain its highest efficiency and most effectively influence school education through a complete reorganization of the whole system of county schools. This can be done effectively and economically without in any way interfering with genuine democracy in education.

The survey committee, to this end, recommends:

1. The organization of a county board of education to have the management of the educational affairs of each county.

2. The election, by the county board of education, of a professional county superintendent to be the chief educational official of the county and executive officer of the board.

The county board of education.—This board should in organization and functions be a prototype of the State board of regents of education. It should be composed of five citizens selected from the county at large, known for their ability and probity, elected for a five-year term from at large over the county, one member to retire each year. Vacancies on the board should be filled by the county board of commissioners for the unexpired term. The board should receive all necessary traveling expenses and a reasonable per diem to compensate them for their time. The board should be strictly legislative, leaving the executive duties to the county superintendent.

The chief powers and duties of the county board of education may be summarized as follows:

1. To enforce the laws relating to education, and the rules and regulations of the State board of regents of education, within their respective counties.

2. To elect the county superintendent, and appoint a deputy superintendent and all necessary supervisors and office assistants; also

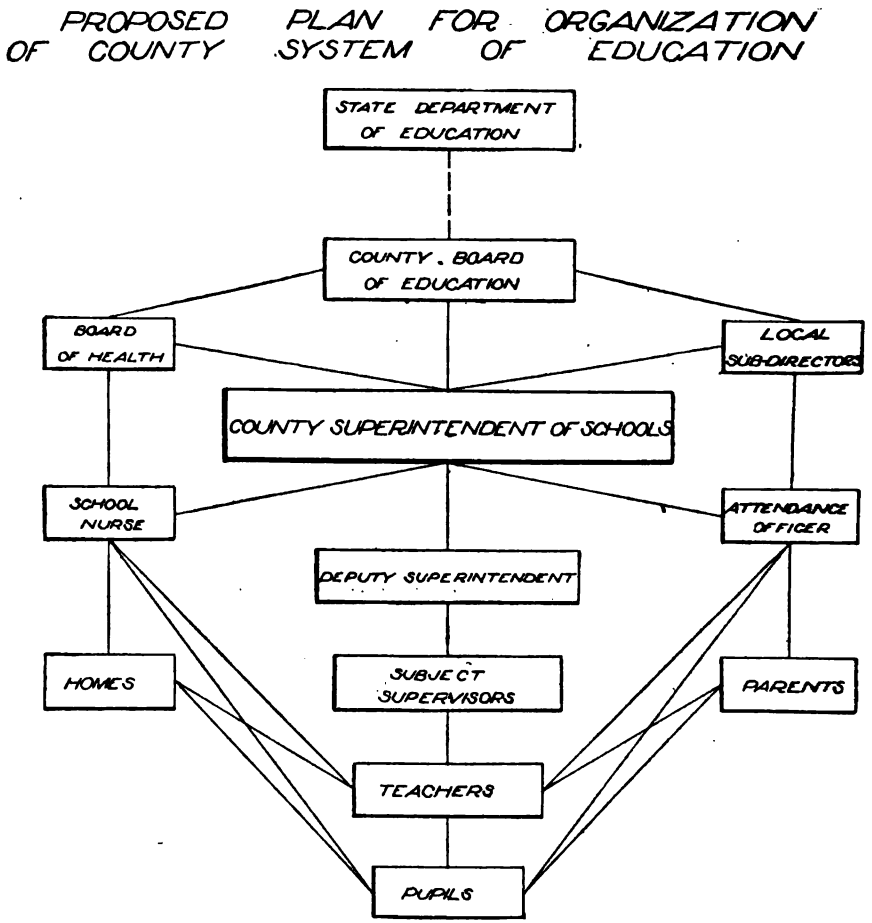

FIG. 4.

to elect one subdirector for each school community within their jurisdiction, provided the county is organized on the county unit plan.

3. To have direct charge of all county schools in counties of more than 2,000 children of school age, and in such other counties as may take advantage of the county unit act, including the closing of unnecessary schools, building new schools, consolidating schools and conveying children to school, and organizing rural high schools.[1]

4. To elect all teachers needed in the county schools on nomination by the county superintendent.

[1] See note on page 30.

5. To levy a uniform school tax on all the taxable property of the county, under legal limitations; and to expend the funds thus procured to equalize educational advantages among all the school children of the county.

6. To exercise all other powers and duties not enumerated above, but which are prescribed by law.

The county superintendent of schools.—In electing its chief executive official, the county superintendent, the county board of education should not be restricted to the county or even the State. The best candidate from anywhere in the country is none too good. Neither should the board be restricted by a candidate's religion, party affiliation, or sex. The term of office should at first be probationary, though never less than four years. Thereafter it should become permanent. The salary should be not less than $2,500 per annum in all county unit counties, and not less than $1,500 in counties not so organized.

The chief powers and duties of the county superintendent of schools should be—

1. To act as executive officer of the county board of education, and to execute, under their direction, the educational policies determined upon by the board.

2. To act as chief educational official of the county, in which capacity he should represent the county board of education.

3. To see that the compulsory attendance act is enforced and the child welfare laws obeyed.

4. To nominate, for appointment by the county board of education, one deputy superintendent or professional supervisor for each fifty schools within his jurisdiction.

5. To supervise the classroom practice of all county schools, either in person or through his assistants.

6. To carry out all policies of the county board, and have charge, under direction of the board, of all schools, including continuation school activities, night schools, part-time schools, short courses, etc., undertaken for promotion of vocational and other education within the county.

7. To have charge of health education in the county, including health inspection done in conjunction with the county board of health, and to direct the work of the county nurse, if such a one is appointed.

8. To keep full records of all educational activities in his county, and to make reports from time to time to the county board of education, and to the State superintendent of public instruction.

9. To examine candidates for special teachers' certificates.

10. To perform such other duties as by law belong to the office.

Chapter VIII.

SCHOOL POPULATION, ENROLLMENT, AND ATTENDANCE.

The best evidence by which to judge the effectiveness of a school system is the extent to which it is utilized by the people of the community or State. If a school system is well organized and firmly administered, a large per cent of the school population will be enrolled in the schools. If the teachers in charge understand their tasks well, treat the children as they should be treated, and teach subject matter well adapted to the needs of the children, a large per cent of the enrollment will be regular in attendance. If, on the other hand, the people neglect to make full use of the schools, or the children lack interest in their studies and attend school irregularly, it is fair to assume that the schools are poorly organized and managed, and are not well adapted to community needs.

The present chapter discusses the topics of school population, enrollment, and daily attendance in South Dakota. From the discussion it is easy to decide whether or not the schools meet the reasonable expectations of the people.

The school population.—The schools of South Dakota are legally open to children over 6 and under 21 years of age. The compulsory school age includes all children between 8 and 18 years. A considerable number of children enter school before they are 6 years, though very few continue in the public schools till they are 21. In this State the total range of school population is estimated by the United States Commissioner of Education at 193,417. Several thousand children under 6 years of age are enrolled, although the legal school age is "over 6 years and under 21 years." This group includes 176,867 children and youths. Unfortunately, the department of public instruction does not divide the school population into elementary, secondary and higher school groups. To obtain the required data considerable work was entailed on the survey committee. The elementary school group is 119,194. This group and the other groups given below are based on figures obtained from the county superintendents and are at least fairly accurate. The high school population is 42,655 and the college group, 15,018. Figure 5 shows the range in school population graphically.

The rural school population has made little change in the past five-year period, showing, indeed, a slight decline between 1911 and 1914, due probably to the land rush and later "proving up" on claims

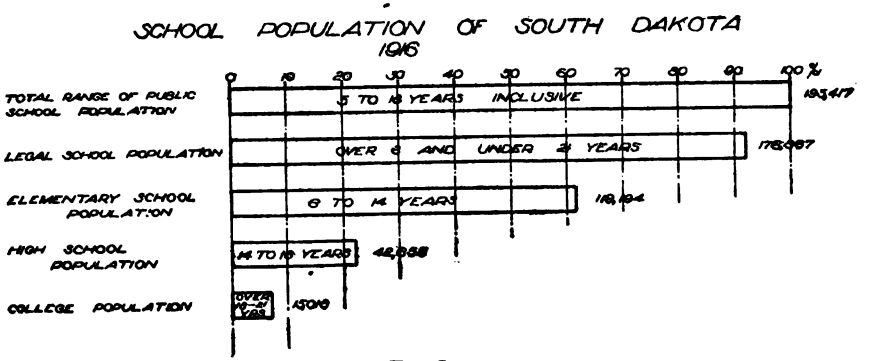

FIG. 5.

and returns to town and homes in other States. Since 1914 there has been a gradual increase in school population. The independent schools have shown a regular increase for the five-year period, being

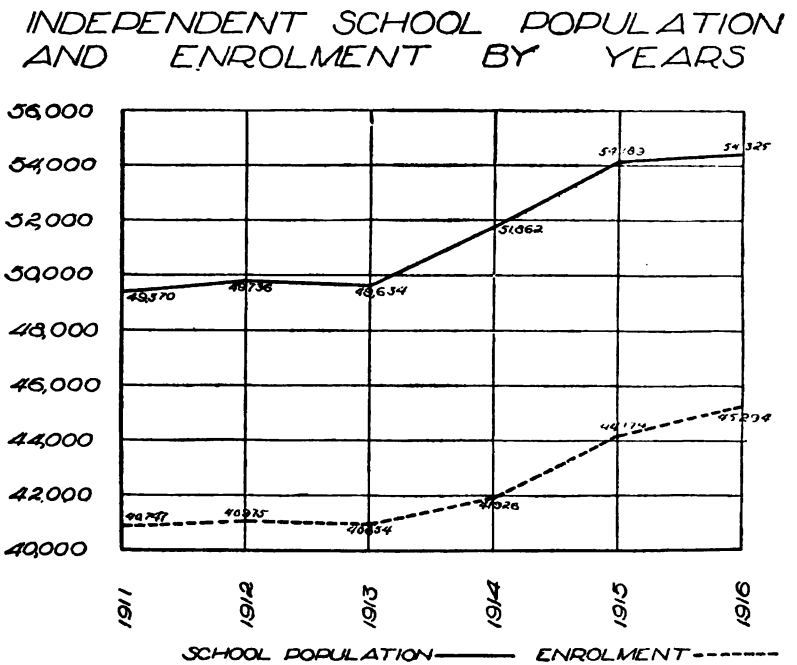

FIG. 6.

49,370 in 1911 and 54,325 in 1916. It appears (figs. 6 and 7) that a considerable percentage of this school population makes no use of the schools placed at their disposal by the State. Thus in 1916 only 72.4 per cent of the rural school population and 83.4 per cent of the in-

dependent school population attended school. If the South Dakota schools were 100 per cent efficient and the people were 100 per cent able and willing to utilize the schools, a somewhat larger per cent of the school population would be enrolled in the schools; although it could not reach 100 per cent, since, as was stated above, a considerable number of these people are already engaged in life activities.

Figured on the basis of the school population between 5 and 18 years of age, the enrollment is even less satisfactory, being 81.04 per cent in 1889–90; 74.49 per cent in 1899–1900; 77.70 per cent in 1909–

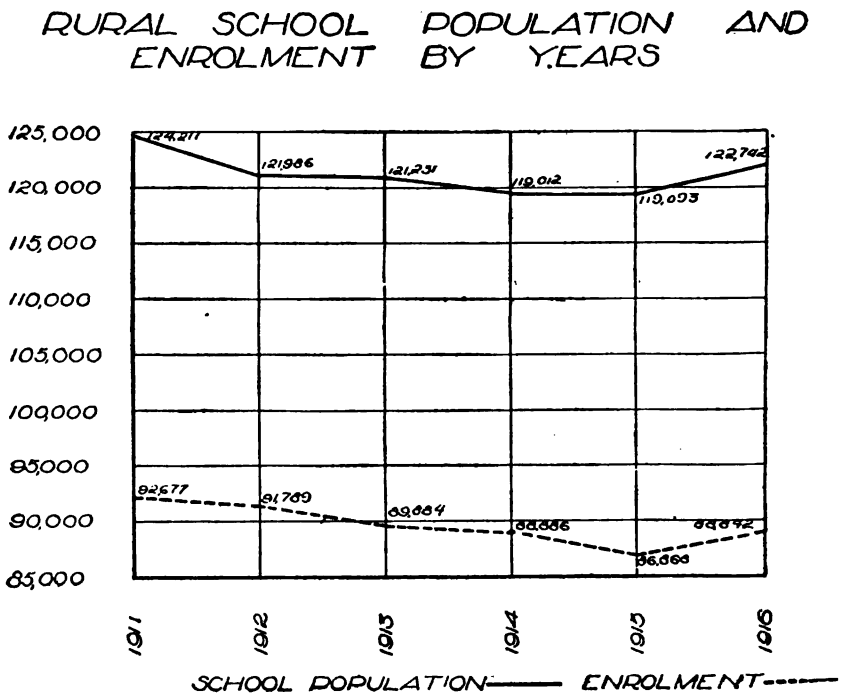

FIG. 7.

10; and only 69.35 per cent in 1915–16. This gradual decline in enrollment may be accounted for by a stricter enforcement of the legal entrance age than formerly, although there is no evidence at hand to prove the assertion. But just how does South Dakota compare in school enrollment with other Middle Western and Western States? Table 6 is the answer to this query. The State ranks twentieth in a group of 22 States. It would seem therefore that more of the school population would be enrolled if the schools had the requisite drawing power and if the compulsory attendance laws were enforced without fear or favor.

TABLE 6.—*Per cent of school population (children between 5 and 18 years) enrolled in the North Central and Western States, 1916.*[1]

1. California	94.47	12. Indiana	80.19
2. Iowa	90.11	13. Minnesota	78.01
3. Wyoming	88.04	14. Oregon	77.61
4. Utah	85.96	15. Nevada	76.27
5. Nebraska	84.84	16. Ohio	74.34
6. Idaho	84.68	17. Washington	73.01
7. Kansas	83.28	18. North Dakota	72.90
8. Michigan	82.62	19. Illinois	71.64
9. Colorado	81.94	*20. South Dakota*	*69.35*
10. Arizona	81.54	21. Wisconsin	66.75
11. Missouri	81.08	22. New Mexico	64.79

Compulsory school attendance.—The compulsory attendance period in this State includes children from 8 to 16 years of age. The compulsory period is longer than in some States, though none too long, as may be seen from the age-grade tables (pp. 45), according to which several thousand children between the ages of 16 and 19 years are still in the elementary grades.

The real question is, Can the attendance law now on the statute books be satisfactorily enforced? In the towns and cities, yes; but in rural districts it is more difficult. The law provides for a paid truant officer for towns and cities, who works under the direction of the city superintendent and local board of education. For the rural schools the county superintendent is ex officio truant officer. Enforcement of the act here depends on the superintendent's initiative and fearlessness. In the first place, it is difficult to discover habitual truancy cases till they are of long standing; in the second place, the votes of these people are cast in the biennial election for or against the county superintendent, which makes the whole a delicate matter to handle. Of the 64 superintendents, 35 reported the law well enforced; 5 reported that it was not enforced in their counties; and 24 declared it was not as well enforced as it might be.

Under the reorganization proposed in Chapter VII these difficulties could be obviated. The superintendent would become responsible for his acts solely to the county board and the State department of public instruction, and he would have clerical assistants to help him administer the county school system on a modern plane. The teachers, also appointed by the county board, could be directed to make monthly reports to the county superintendent, on specially prepared blanks, stating just what number of children and who, coming within the law, are not enrolled. The county superintendent, on behalf of the county board of education and the State department of education, should then begin immediate proceedings under the law.

Daily attendance and school enrollment.—An efficient school system not alone enrolls a large per cent of the children, but it holds all

[1] Montana not reported.

who are physically and mentally fit in daily attendance until they have at least finished the elementary-school course. Inclement weather, long distance to school, bad roads, and, particularly, lagging interest in school work contribute to irregularity of attendance. In an efficient system, such as the county unit can provide, schools are erected where they are needed and nowhere else; the schools are larger, the teachers better—because better paid; and the work is made interesting and attractive enough to sustain, in the children, a desire to be regular in attendance.

That school conditions in South Dakota are far from satisfactory is evidenced by the poor daily attendance on the already small enrollment. In 1910 the average daily attendance in all the schools was only 64 per cent; in 1913 the attendance reached 75.7 per cent; but in 1915–16 it was down to 70 per cent. With the enrollment at 69.35 per cent of the school population, the actual attendance on the basis of school population (1916) would be 48.54 per cent. In other words, less than one-half of the school population actually use the schools of the State, day by day, throughout the short school year. In daily attendance South Dakota again ranks in twentieth place in a group of 23 States, Illinois standing at the head of the list with

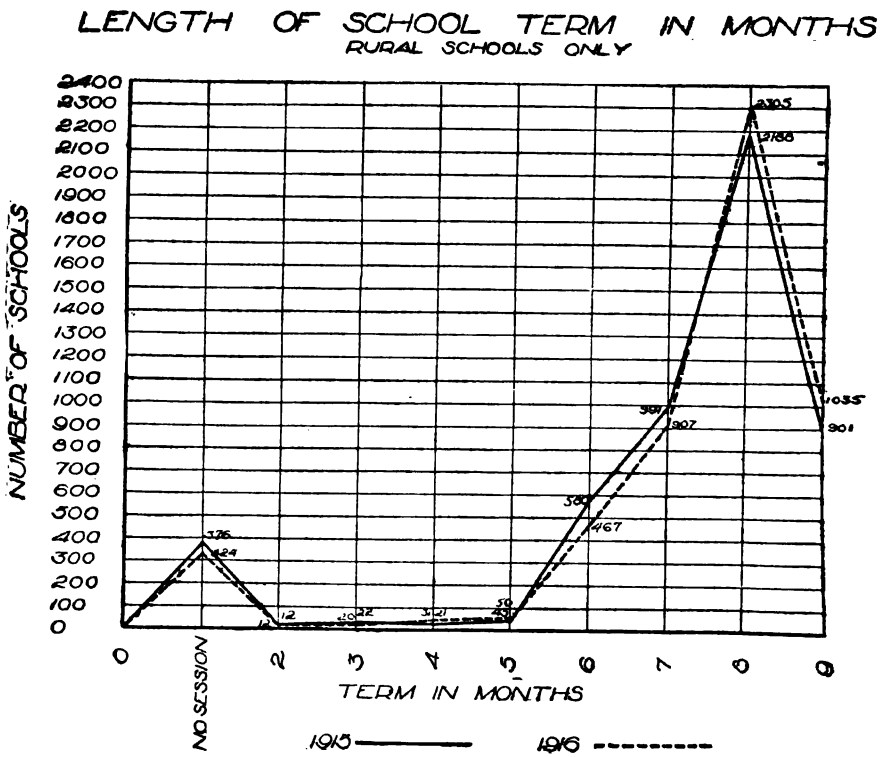

FIG. 8.

an attendance of 89.8 per cent and Oregon second with 89.7. The average for the United States is 75.5 per cent, which is 5.5 higher than for South Dakota. Low daily attendance, even more than poor enrollment, can be traced directly to an ineffective teaching process, due perhaps more to the small unit organization and all the weaknesses that go with it than to anything else.

Length of the school year.—The next question is, How many days in the year are the schools kept open for teaching purposes? In 1889–90 the schools of the State were kept open 145 days; in 1899–1900 they were open only 129.1 days; in 1909–10 this increased to 165.9 days; and in 1915–16 to 170 days. The actual average attendance of each person enrolled was only 118.9 days. Figure 8 shows graphically the length, in months, of 2,400 rural schools.

This important factor in school administration has been approached by the committee from another angle. A study was made, with the help of the county superintendents and teachers, of two rural schools in each county, one school being classed as "good," the other as "indifferent." The study included a calculation from the school registers for the last eight years, and shows exactly how many or how few days these children have spent in school. Figure 9 makes the standard of nine school months for eight years the basis of the graph. On this basis it is seen that the 30 schools are open for pupils, on the average, only 88 per cent of the time of the standard; and the average number of days in the school life of these 177 pupils is only 68 per cent of the standard.

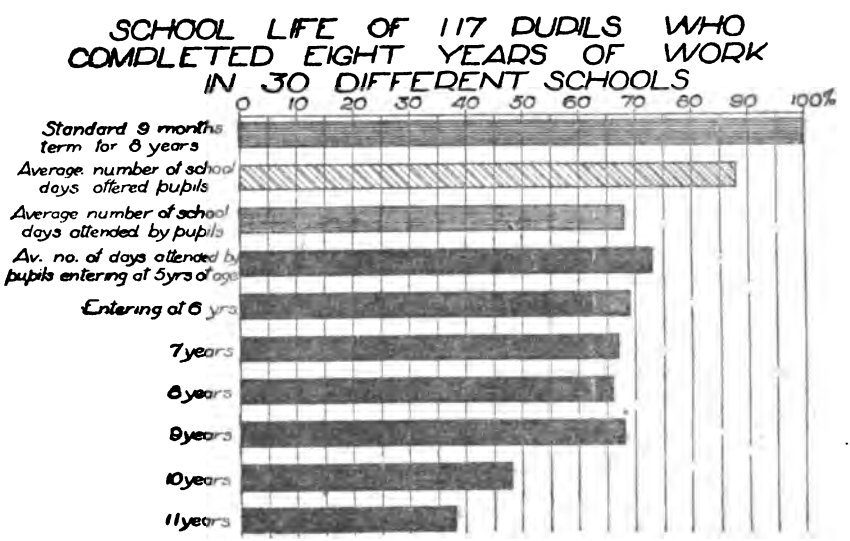

FIG. 9.

This fundamental weakness in South Dakota's public-school system is contrasted in the following figures with the length of the school year in all the different kinds of schools in the Canadian Province of Saskatchewan.

Rural, town, and village schools.

1906	1907	1908	1909	1910	1911	1912	1913	1914	1915	1916
155.0	148.61	146.46	157.89	154.17	158.0	151.00	157	163	167	195
204.0	205.40	209.08	202.20	193.57	187.0	192.00	192	197	201	202
179.5	177.00	152.63	160.10	158.59	163.0	165.44	183	188	184	198

Saskatchewan was carved out of the old North West Territory about 12 years ago. It has realized from the inception of its provincial life that to utilize liberally the school plants which have been provided at great outlay is good policy. The Saskatchewan schools are annual schools, most of them being open throughout the growing season of the year. The longest vacation—about four weeks—comes usually immediately after the Christmas holidays, when the winter is most severe. Schools for an agricultural population should be in operation during the summer season, to make possible a utilization of the land for gardening and agricultural experimentation—out of which the new curriculum must largely spring. South Dakota would be wise to emulate the example of Saskatchewan in these matters.

Tables 7 and 8 give the enrollment and attendance by months for each of two groups of children: 32,000 rural children and 15,000 village children in South Dakota. The tables represent the best schools in the State. The 32,367 rural children enrolled in November, 1916, are reduced to 13,478 in May, because the schools close so early in the season. In these respects, at least, the village schools make a much better showing.

TABLE 7.—*School attendance by months—rural.*

Attendance.	November, 1916.	December, 1916.	January, 1917.	February, 1917.	March, 1917.	April, 1917.
Number enrolled	32,367	32,342	31,357	29,778	28,159	25,063
Average attendance	24,783	24,932	22,817	21,553	20,933	18,696
Percentage of attendance	76	77	72	72	78	74

Attendance.	May, 1917.	June, 1917.	July, 1917.	August, 1917.	September, 1917.	October, 1917.
Number enrolled	13,478	851	.....	.....	23,760	28,134
Average attendance	10,216	665	.....	.....	18,500	22,187
Percentage of attendance	74	78	.....	.....	77	78

TABLE 8.—*School attendance by months—village.*

Attendance.	November, 1916.	December, 1916.	January, 1917.	February, 1917.	March, 1917.	April, 1917.
Number enrolled	12,925	15,525	15,408	15,107	14,728	14,110
Average attendance	10,338	13,012	12,415	12,328	12,251	11,886
Percentage of attendance	79	84	79	82	83	86

Attendance.	May, 1917.	June, 1917.	July, 1917.	August, 1917.	September, 1917.	October, 1917.
Number enrolled	12,610	.....	.....	.....	15,019	15,839
Average attendance	10,793	.....	.....	.....	13,326	13,704
Percentage of attendance	86	.....	.....	.....	88	86

Advancement of children in school.—Normal children are expected to enter school in this State at the age of 6 years. If they advance one grade each year, they should finish the elementary school course in their fourteenth year. Any average school, reasonably well taught and open for 8 to 9 months annually, should be able to prepare the pupils for their eighth-grade examinations in 8 years' time.

The survey committee has made an age-grade study of nearly 53,000 rural children and nearly 23,000 children in village schools, to ascertain just how early in life the children enter school, how rapid is their advancement, and how well sustained their attendance in school. The results are tabulated in Tables 9 and 10 below. Table 9 enrolls 52,923 children; of these 10,496 are in Grade I. Seventeen hundred and ninety-eight entered school before reaching the sixth year. They are under age and ahead of their classes. Four thousand nine hundred and sixty children are of normal age and grade; while 2,277 are one year behind normal grade; 648 are two years behind; 171, three years, and so on. A similar analysis can be applied to Table 10, with just as interesting results.

TABLE 9.—*Age-grade of 53,000 rural pupils.*

Grades.	Under 6.	Over 6 years up to 7.	Over 7 years up to 8.	Over 8 years up to 9.	Over 9 years up to 10.	Over 10 years up to 11.	Over 11 years up to 12.	Over 12 years up to 13.	Over 13 years up to 14.	Over 14 years up to 15.	Over 15 years up to 16.	Over 16 years up to 17.	Over 17 years up to 18.	Over 18 years up to 19.	Total by grades.
I	1,798	4,960	2,239	891	294	126	66	51	43	22	0	4	2	0	10,496
II	18	1,019	2,522	1,755	708	269	125	61	27	20	0	1	0	0	6,525
III	.....	105	855	2,171	1,507	865	305	153	77	42	16	8	3	1	6,108
IV	.....	9	108	884	2,148	1,690	958	438	215	107	44	22	8	1	6,632
V	.....	.....	19	106	814	1,866	1,560	985	481	247	104	32	5	5	6,225
VI	.....	.....	.....	11	142	799	1,600	1,703	1,013	558	295	90	26	3	6,240
VII	.....	.....	.....	.....	6	89	436	1,208	1,378	1,042	521	186	69	24	4,959
VIII	.....	.....	.....	.....	.....	16	149	685	1,297	1,608	1,130	605	190	58	5,738
Total of ages	1,816	6,093	5,743	5,818	5,619	5,720	5,199	5,284	4,531	3,646	2,110	948	303	92	52,923

TABLE 10.—*Age-grade of 23,000 village pupils.*

Grades.	Under 6.	Over 6 years up to 7.	Over 7 years up to 8.	Over 8 years up to 9.	Over 9 years up to 10.	Over 10 years up to 11.	Over 11 years up to 12.	Over 12 years up to 13.	Over 13 years up to 14.	Over 14 years up to 15.	Over 15 years up to 16.	Over 16 years up to 17.	Over 17 years up to 18.	Over 18 years up to 19.	Total by grades.
I	492	2,277	648	171	58	10	3	2	3	0	2	.....	.....	.....	3,666
II	7	480	1,495	585	180	48	19	9	1	1	.....	.....	.....	.....	2,825
III	.....	40	519	1,299	663	238	80	43	9	11	5	0	1	.....	2,908
IV	.....	26	364	1,178	748	335	194	54	26	6	2	.....	.....	.....	2,933
V	.....	.....	.....	44	323	925	718	341	151	65	26	6	.....	.....	2,599
VI	.....	.....	.....	3	24	326	864	689	353	183	91	33	5	.....	2,571
VII	.....	.....	.....	.....	3	45	274	777	746	395	185	47	22	7	2,501
VIII	.....	.....	.....	.....	.....	3	48	264	687	738	449	208	61	28	2,486
Total	499	2,823	3,026	3,280	1,999	1,930	2,200	2,179	1,976	1,399	760	294	89	35	22,489

Tables 11 and 12 summarize the data contained respectively in Tables 9 and 10. These summaries show conclusively that the rural and village children have not made the normal advancement in school that might have been expected. The tables disclose these two facts: (1) That an unusually large number of children—rural 51.17 per cent and village 39.87 per cent—are over age, and one or more years behind normal standing; and (2) that the wastage up through the grades is very large.

TABLE 11.—*Rural children under age, normal age, and over age.*

Grade.	Number in each grade.				Per cent in each grade.		
	Under age.	Normal age.	Over age.	Total.	Under age.	Normal age.	Over age.
I	1,798	4,960	3,738	10,496	17.13	47.26	35.61
II	1,037	2,522	2,966	6,525	15.90	38.65	45.45
III	960	2,171	2,977	6,108	15.71	35.54	48.74
IV	1,001	2,148	3,483	6,632	15.09	32.39	52.52
V	939	1,866	3,420	6,225	15.09	29.97	54.94
VI	952	1,600	3,688	6,240	15.26	25.64	59.10
VII	531	1,208	3,220	4,959	10.71	24.36	64.93
VIII	850	1,297	3,591	5,738	14.81	22.60	62.59
Total	8,068	17,772	27,083	52,923	15.25	33.58	51.17

TABLE 12.—*Village children under age, normal age, and over age.*

Grade.	Number in each grade.				Per cent in each grade.		
	Under age.	Normal age.	Over age.	Total.	Under age.	Normal age.	Over age.
I	492	2,277	897	3,666	13.42	62.11	24.47
II	487	1,495	843	2,825	17.23	52.93	29.84
III	559	1,299	1,050	2,908	19.23	44.67	36.10
IV	1,568	748	617	2,933	53.46	25.51	21.03
V	367	925	1,307	2,599	14.12	35.59	50.29
VI	353	864	1,354	2,571	13.69	33.65	52.66
VII	322	777	1,402	2,501	12.89	31.06	56.05
VIII	315	687	1,484	2,486	12.68	27.63	59.69
Total	4,463	9,072	8,954	22,489	19.85	40.34	39.87

Table 13 gives the grade range of rural children who, under normal conditions, should have reached the eighth year. Out of a total of 4,531 children who should have reached the eighth grade, all except 1,297, or 28.62 per cent, are still below that grade.

TABLE 13.—*Grade range of rural children who under normal conditions should be in eighth grade.*

Grades.	In Grade I.	In Grade II.	In Grade III.	In Grade IV.	In Grade V.	In Grade VI.	In Grade VII.	In Grade VIII.	Total.
Number of pupils	43	27	77	215	481	1,013	1,378	1,297	4,531
Per cent	0.94	0.59	1.69	4.74	10.60	22.35	30.41	28.62	100

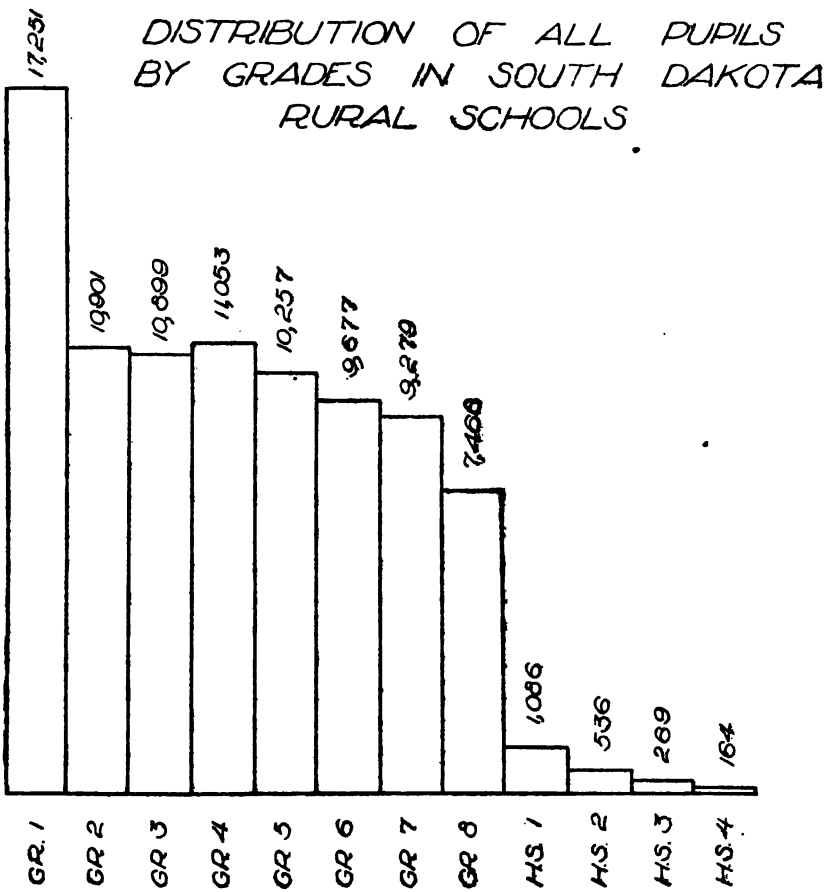

FIG. 10.

Figure 10 shows graphically the wastage up through the grades. This graph is based on the whole number of children enrolled in the rural schools. Grade 1 contains 17,251 pupils; this drops to 10,899 in Grade III, after which it increases to 11,053 in Grade IV. This

great variation is due to loose classification of the beginners, who are often held as repeaters in the first grade and are later promoted direct to the third grade. When the eighth year is reached only 7,468 children remain out of the much larger total which was enrolled in the first grade. But now comes the most serious break; of all these children, only 1,086 enter rural high-school courses, dwindling finally to 164 students in the last year. To be sure some rural pupils do manage to attend high school in town.

As the educated leadership of rural communities must come from the schools, agricultural South Dakota must either seek this education away from the open country or go without the leadership.

Summary.—The State has invested millions of dollars in permanent school plants. This great investment is not utilized as fully as it should be. The chief cause is indifferent school organization and administration, and a teaching process that does not give the children the kind of instruction needed in this great agricultural State. This is proved by the comparatively small enrollment of school population and the low daily attendance. In enrollment of school population the State ranks twentieth among the 23 States comprising the Middle Western and Western groups; in daily attendance likewise it is twentieth. If the daily attendance were reckoned on the basis of school population instead of on enrollment, less than one-half of the school population would be in school daily. The school year is 170 days long. This is more than in the poorer States, but behind the better States. The schools ought to be reorganized as all-year schools, in keeping with the new kind of school proposed later in the report. An average pupil's school life is surprisingly short, because of late enrollment and irregular attendance. Very few rural children, unfortunately, get the advantages of secondary and higher schools. Nearly all the culture and all the technical and practical education of South Dakota farm folk must be acquired in these small schools, during the short period now allotted to school life. Every thoughtful person will agree that the level of cultural and practical leadership can not be raised much before radical changes are made in the organization of the small schools, chiefly the rural schools.

Recommendations.—The survey committee recommends: 1. A careful annual census of the school population in all school districts of the State, to be made by the authorities now provided by law, but under immediate supervision from the State department of public instruction, on uniform blanks to be furnished by the State. The census should classify the school population as follows: 5 to 18 years; 6 to 21 years; over 8 and under 16 years; 6 to 14 years; and over 14 to 18 years. This would give the desired basis for a complete classification for State and Federal uses.

2. The compulsory attendance act to be enforced by, and responsibility for enforcement placed on, the State department of public instruction working through the county boards of education.

3. A system of records to be perfected by the State department of education, to be used in transferring pupils from community to community, that will make evasion of school attendance impossible.

4. A practical reorganization of the school year as follows: The school year to open January 1 of each year, at which time new teachers are to be hired and school work begun. This would make it possible to retain the same teachers for both spring and fall of the year, and make easy the utilization of the school premises for gardening and agricultural experimentation (see p. 70).

5. Appropriate legislation to lengthen the teaching year to a minimum of 9 months of 20 teaching days each; provided that the teaching hours may be shortened during the season of the year when the pupils' labor is essential to agricultural and other industrial work.

Chapter IX.

SCHOOL SUPPORT: WHAT THE STATE PAYS FOR EDUCATION.

Sources of support.—The sources of school support in the State of South Dakota are local taxes levied by the local school districts and township school district, county taxes, and sundry income from the State permanent fund. In addition to these sources recourse may be had to the sale of bonds when the schools require funds for the purchase of school sites and the construction of school buildings. South Dakota is one of a small group of States which do not levy a general State tax for education. The other States of this group are Idaho, Oregon, and Wyoming.

Rate and amount of taxation.—The local taxes are levied by the district school board, which may, under law, raise for all purposes not to exceed 20 mills on the dollar yearly: but the regular annual tax levy must not exceed 10 mills of the assessed value of property in common school districts, nor exceed 15½ mills in independent school districts. Boards may issue bonds not to exceed 4 per cent of the assessed valuation of the property, with the approval of the governor. The money thus raised, as previously mentioned, is to be used solely for the purchase of school sites and the building of schoolhouses.

The county tax is placed by the county commissioners, who levy a tax of $1 on each elector of the county. The proceeds of this tax go to support the common schools. The money is distributed in proportion to the number of school children between 6 and 21 years.

Additional funds are secured from fines collected in the course of enforcing the laws, such as the laws that deal with the removal of timber or wood from school, public, or endowment lands; the general compulsory school attendance; child labor; and laws which prohibit the making of false reports by district school board clerks or treasurers, or which penalize the failure of the State superintendent or district officers to report.

The State permanent school fund consists of the proceeds from the sale of school lands, which are invested in farm mortgages, county, school, and municipal bonds, and of deferred payments on outstanding contracts.

The State permanent school fund.—The schools of South Dakota are especially fortunate in the way they have been endowed with school lands. Through a policy of wise forethought the State has conserved for school use 2,339,912 acres of common-school land, and 597,285 acres of endowment and public-building lands, making a total of 2,937,197 acres. At the close of the fiscal year ending June 30, 1917, the permanent school fund amounted to $9,112,076.07, while the deferred payments on school land contracts amounted to $4,820,226.94, making a grand total of $13,932,303.01. All this amount is drawing interest at the rate of 5 and 6 per cent. The interest and income apportioned to the common schools on December 1, 1917, was $1,113,324.02, or $6.22 per capita for each child of school age in the State. Besides this, there was apportioned to the higher educational institutions and schools for defectives and the industrial schools for the fiscal year 1917, $111,925.89.

The source of this income has been wisely protected by law, which prohibits the school lands from being sold at less than $10 per acre. It is believed that when all the school lands are finally sold there will be a permanent fund of at least $90,000,000, as the present price paid for these lands averages from $17 to $40 per acre.

Growth of receipts and expenditures.—Tables 14, 16, and 19 show the general tendency with respect to receipts and expenditures of funds used in the support of the public schools in the State for the past four years.

TABLE 14.—*School moneys received during the last four years.*

Year.	Income of permanent school funds and rent of school lands.	From State tax or appropriation.	From local tax or appropriation.	From other sources, State and local.	Total, excluding balances on hand and proceeds of bond sales.
1912-13	$767,005	.....	$2,260,244	$259,908	$3,287,157
1913-14	992,954	.....	4,061,654	244,920	5,299,528
1914-15	1,002,655	.....	4,277,784	337,992	5,618,361
1915-16	1,016,274	.....	4,716,029	328,254	6,060,557

The table above indicates that there has been relatively little increase in the income from the permanent fund during the last three years, the principal gain being in the amount of local tax levied. A slight loss is indicated in the amount derived from other sources.

TABLE 15.—*Sources of receipts during the years 1915 and 1916.*

Sources.	Rural districts.		Independent and consolidated districts.		All districts.	
	1915	1916	1915	1916	1915	1916
Balance on hand, close fiscal year	$1,155,303.62	$1,257,064.08	$413,146.77	$824,476.76	$1,568,450.39	$2,081,540.84
Received from apportionment	696,175.23	707,998.57	306,479.27	308,274.96	1,002,654.50	1,016,273.53
Received from tax	2,562,749.39	2,846,586.76	1,715,034.65	1,869,442.95	4,277,784.04	4,716,029.71
Received from sale of bonds	131,610.53	239,762.59	716,515.64	282,578.48	848,126.17	522,341.07
Received from all other sources	109,575.43	120,881.19	228,347.04	207,372.41	337,922.47	328,253.60
Total	4,655,414.20	5,172,293.19	3,379,523.37	3,492,145.56	8,034,937.57	8,664,438.75
Total, excluding bond sales	3,500,110.58	3,915,299.11	2,966,376.60	2,667,668.80	6,466,487.18	6,582,897.91
Total, excluding bond sales and balance on hand	3,368,500.05	3,665,466.52	2,250,860.96	2,385,090.32	5,618,316.01	6,060,556.84

It appears from the above table that the amount received from the sale of bonds in 1915 was more than 10 per cent of the total receipts; in 1916 this proportion was nearly 6 per cent.

Expenditures.—While no attempt has been made to compare the relative growth of receipts and expenditures, Tables 16 and 19 are included to show the growth of expenditures for public education in the State during the last quadrennium.

TABLE 16.—*Expenditure for public school education, based on school enrollment.*[1]

Year.	Total expenditure.	School enrollment.	Per capita expenditure.	Year.	Total expenditure.	School enrollment.	Per capita expenditure.
1912-13	$4,109,642	132,764	$30.96	1914-15	$5,065,508	130,842	$38.72
1913-14	4,538,026	130,812	34.68	1915-16	5,784,086	134,136	43.12

[1] Based on the Annual Report of the United States Commissioner of Education for 1915-16.

If one compares South Dakota with the other 22 States in the north central and northwestern sections, the position of the State is not so favorable.

TABLE 17.—*Amount expended on public schools for each child 5 to 18 years of age (1915-16).*

1. Montana	$65.71	14. Colorado	$33.46
2. California	56.24	15. Ohio	33.37
3. Nevada	43.73	16. Michigan	32.03
4. Arizona	42.60	17. Kansas	31.79
5. Washington	38.91	18. Nebraska	31.37
6. Wyoming	38.81	*19. South Dakota*	*29.72*
7. Oregon	36.61	20. Illinois	29.07
8. Idaho	36.55	21. Wisconsin	24.30
9. North Dakota	36.43	22. Missouri	19.97
10. Iowa	35.60	23 New Mexico	16.76
11. Utah	35.51	United States	23.87
12. Indiana	34.13	Average	35.50
13. Minnesota	33.87	Median	34.13

TABLE 18.—*Amount expended on public schools for each child 5 to 18 years of age in average attendance (1915–16)—North Central and Western States only.*

1.	Montana	$86.37	14.	Iowa	$52.15
2.	California	78.17	15.	Indiana	51.77
3.	Arizona	77.85	16.	Utah	50.84
4.	Nevada	76.26	17.	Nebraska	50.06
5.	North Dakota	69.62	18.	Kansas	49.40
6.	Washington	68.33	19.	Michigan	47.66
7.	Idaho	63.26	20.	Illinois	45.16
8.	*South Dakota*	*61.26*	21.	Wisconsin	44.90
9.	Wyoming	57.65	22.	New Mexico	38.79
10.	Minnesota	57.22	23.	Missouri	33.65
11.	Colorado	55.90		United States	41.72
12.	Ohio	52.88		Average	57.50
13.	Oregon	52.59		Median	52.88

TABLE 19.—*Growth of expenditure per capita of population and relative rank of South Dakota among the Middle Western and Western States.*

Year.	Amount per capita.	Relative rank.	Year.	Amount per capita.	Relative rank.
1912–13	$6.39	27	1914–15	$7.45	16
1913–14	6.86	32	1915–16	8.23	14

According to the Annual Reports of the United States Commissioner of Education, upon which Table 19 is based, in the year 1912–13 South Dakota ranked twenty-seventh among all the States in expenditure for public schools per capita of total population. In 1913–14 the State ranked thirty-second, the ratio of increase in expenditure per capita having fallen considerably. In the year 1914–15 the State ranked sixteenth, and in the year 1915–16 it was the fourteenth in rank, with an expenditure of $8.23 per capita of total population. Montana ranks highest in per capita expenditure of total population, with $14.14, which exceeds the expenditure of South Dakota by nearly 70 per cent.

According to Table 17, South Dakota ranks nineteenth among the 23 States under comparison with respect to the amount expended on public schools for each child 5 to 18 years of age (1915–16). A glance at the table shows that the State is considerably lower than either the average as represented by Utah or the median as represented by Indiana. Compared with Montana, California, and Washington, States which are giving much attention to the development of good public-school systems, the showing of South Dakota is very poor.

According to Table 18, however, South Dakota ranks much higher, although the amount expended on each child 5 to 18 years of age, based on average attendance, is only $3.61 more than the average, which is approximately $57.65, or that of Wyoming. Washington is expending over 11 per cent more than South Dakota, and California exceeds the latter State by over 27 per cent in this type of expenditure.

Readjustment of the basis for division of taxation.—According to Table 20, three important features in the present tax system deserve special consideration. The first is the relatively large proportion of income derived from the permanent funds as compared with the other States, South Dakota being exceeded in this respect by Nevada with 21.91 per cent and Wyoming with 38.8 per cent (1915–16).

TABLE 20.—*Percentage analysis of school revenue.*

Year.	Derived from permanent funds.	Derived from local tax, etc.	Derived from other sources.	Year.	Derived from permanent funds.	Derived from local tax, etc.	Derived from other sources.
1912–13	23.33	68.76	7.91	1914–15	17.85	76.14	6.01
1913–14	18.74	76.64	4.62	1915–16	19.50	74.20	6.30

This proportion of 19.50 per cent is high, compared with the average for the North Central division of States—3.12 per cent and the average of the western division—7.95 per cent.

The second feature is the absence of a general State tax for public-school support. This State tax averages for the entire country 15.03 per cent of the total school revenue. In the North Central division of States it amounts to 10.72 per cent, in the North Atlantic division 12.51 per cent, in the Western division 18.57 per cent, in the South Atlantic division 24.91 per cent, and in the South Central division 29.87 per cent.

The third feature is the relatively large proportion of school revenue which is raised by local district taxation, the county tax being of little significance. It is of interest to note that the taxpayers of the local districts are defraying about three-fourths of the public-school expenditure of the State. While this proportion differs but slightly from the average proportion for the entire country, yet in the light of the peculiar characteristics of the State there is evidence of the need of a redistribution of the burden and responsibility of taxation.

If the school districts were homogeneous in character, if there were a general equality of population, industrial activity, and wealth, as well as in educational aims, the district method of taxation might receive less criticism. But such equality of conditions does not hold to any great extent in any State, and certainly it does not hold in South Dakota.

South Dakota may be roughly divided into four geographical sections: The first includes 10 western counties with no railroads, few, if any, important tax-producing industries, and a meager population of 21,946 inhabitants; the second section includes 24 counties

with a small railroad mileage, a corresponding amount of taxable industries, and a population of 127,337; the third section includes 20 counties with considerable railroad mileage, a fair proportion of taxable industries, and a population of 200,032; the fourth section, which is largely in the eastern part of the State, includes 13 counties which have an extensive railroad mileage, a corresponding large proportion of taxable properties and industries of importance, and a population of 208,746.

It is perfectly natural to expect under the conditions mentioned above that there will be great difference in the character of the school districts of the State. It is evident that the school districts which are on the railroads will tend to be more populous, industrial, and to a certain extent more prosperous than those situated more distant. The schools of these wealthier and more populous districts can be operated to a greater advantage than can those which are in poorer and less populous communities. The larger average attendance and the correspondingly low per capita cost are not possible in the more remote and less-favored regions. The fluctuating population in many of the rural centers also tends to retard continuous and consistent development of the public-school support.

In many districts where consolidation of schools has been effected a lack of financial means still causes inefficiency, hardships, and a slowing up of educational progress of the community.

State and county taxes.—Notwithstanding the generous attitude of the people of the State toward public education, it is apparent that the present plans of school support are antiquated, inadequate, and entirely unsuited to a progressive, wealthy, and growing commonwealth of the rich Northwest. There is need of definite plans of support which will insure the successful carrying out of the best educational policies throughout the entire State. Especial attention should be given to the weaker, pioneer districts.

It is the conviction of the committee that a sound and progressive State policy of public education will be materially helped by shifting the burden of taxation. First, the county should be the responsible unit of local educational support in harmony with the plans of the State as a whole. In this manner it will be possible to equalize the conditions of taxation and expenditure within the constituent districts. The local districts should be allowed to supplement the county tax in order to more fully realize local ideals, because the county tax may not always be sufficient for that purpose. The county tax tends to insure a fair taxation and expenditure throughout its borders, but at that point it reaches its limitation.

In order to safeguard the interests of the State as a whole and develop the larger sections which are in need of help, a permanent

State tax is necessary. While South Dakota is blessed with an excellent income from its permanent funds, this is not a sufficient amount to meet the needs of an aggressive State policy. In the second place, the State should levy an annual school tax which, in addition to the income from the permanent funds, would amount to one-third of the total public-school revenue. Such a proportion properly expended will tend to equalize conditions throughout the State. The experience of some of the most progressive State school systems, such as are found in California, Washington, and New Jersey, shows the great value of a well-directed State tax of good proportions. According to the best information the majority of the public schools lying in the more remote and poorer districts of California and Washington are as well supported as the schools in the more favored and more populous communities.

The proceeds of the State tax should be used to extend a special aid to poor districts in the sparsely settled sections of the State where consolidation of schools is yet impracticable. It might also well be used as a stimulus to further consolidation of schools, and in assisting communities to maintain teacher-training departments in high schools; also for the association of district schools and for the maintenance of rural high schools. The amount of aid granted should be based on the aggregate daily attendance and the number of teachers employed rather than on the total school population of the county district, the proportion being two-thirds on aggregate attendance and one-third on the number of teachers employed.

Public education involves continually growing expenses.—The essential characteristics of first-class educational support are stability and growth. A fluctuating income can not bring good results. It is therefore necessary to raise and expend as large an amount of money as the State and the counties can afford in order to reach the maximum of efficiency. A study of the expenditures in some of the States with first-class public-school systems shows that these States have been willing to do nearly twice as much as South Dakota in order to reach their goal. Public education can not be a money-saving process. The present conditions in this country demand a much larger expenditure than usual in order to obtain the needed efficiency of school service.

Summary of recommendations.—The committee believes that the stability and growth of the public-school system in South Dakota require certain definite modifications in the present system of taxation. To this end it recommends:

1. The adoption of the county as the unit of local taxation; the funds when collected to be used to equalize educational advantages over the county.

2. The local school community to be authorized to levy taxes or to issue bonds for extraordinary purposes only, such as erecting new buildings and procuring larger sites and school farms.

3. The levying of a State tax equivalent to one-third of the whole school maintenance of the State (including the present permanent school fund).

4. The adoption of a permanent millage tax for the maintenance of the State's higher educational institutions, to be apportioned according to the needs of each institution, to supplant the present legislative appropriations.

5. The adoption of a new basis for the distribution of the present State permanent fund and future State taxes as follows: (*a*) The permanent fund to be distributed on the basis of aggregate daily attendance and the number of teachers employed, instead of as at the present on the basis of school population, provided that weak schools in sparsely settled sections of the State be credited with not to exceed 2,000 attendance days in addition to their actual aggregate daily attendance; (*b*) the proposed State taxes to be awarded for consolidation of schools, establishment of rural and other high schools, teacher training in high schools, etc., only when the local school communities have indicated their cooperation by agreeing to certain requirements made by law, as a stipulation under which such aid may be received.

Chapter X.

PRESENT STATUS OF RURAL SCHOOL PLANT AND ITS ADAPTABILITY TO PUBLIC NEEDS.

Introduction.—Before it can be decided whether a school meets the needs of a locality it is necessary to know both the community and the school. The opening chapter of this survey gives sufficient information, relative to the State and its people, for the reader to form an intelligent background of the community that is to be served by the school. Other chapters have enlarged upon the organization, administration and supervision of rural schools, their daily attendance, course of study and status of instruction. However, these do not comprise all the essentials of a school. In judging the efficiency of any enterprise in the industrial world the first consideration is generally given to the plant. This is no less true of the school. The attendance, course of study, and instruction are, in a greater or less degree, limited or expanded by the existing school plant. A study of the plant includes the grounds, buildings, equipment, and sanitary conditions. These form the basis for discussion in this chapter. The conclusions are based upon answers to questionnaires sent the teachers and from personal observations in eight counties representative of typical areas of the State. Questionnaires, either wholly or partly answered, were returned by 5,301 teachers. This represents over 90 per cent of the entire number of teachers. Of the questionnaires returned, 3,941 were from teachers in open country schools and 1,360 from teachers in villages.

School locations.—The following table gives the teachers' estimate of the area of the school grounds:

TABLE 21.—*Size of school grounds.*

Area.	Open country.		Village.	
	Number.	Per cent.	Number.	Per cent.
Less than ½ acre	148	5	18	4
Half acre	378	12	34	8
One acre	1,687	56	197	46
More than 1 acre	817	27	178	42
Total	3,030	100	427	100

Comparison of the data indicates that the area of over half of the grounds in the open-country school is 1 acre. Forty-two per cent of the village grounds contain more than 1 acre. The encouraging thing is that there are more grounds in both types of schools with more than 1 acre than with less than 1 acre. Replies were received from 3,388 teachers in open country and from 482 in the villages, as to whether the grounds were fenced. In the open country the grounds of 996 schools, or 29 per cent, were fenced, and in village schools 164, or 34 per cent, were fenced.

These replies from teachers indicate that a larger percentage of school grounds in village schools are fenced than in open-country schools. Nineteen per cent of the open-country schools report woven wire as the kind of fencing used.

Playgrounds.—Even though the school ground may consist of the traditional acre, the buildings are often placed in such a position as to prohibit the utilization of the greatest possible playground space. The following table shows the conditions in South Dakota:

TABLE 22.—*Size of playgrounds.*

Size.	Open country.		Village.	
	Number.	Per cent.	Number.	Per cent.
No playground	50	2	.....	.....
One-quarter acre	184	8	20	5
One-half acre	473	20	60	17
Over ½ acre	1,652	70	273	78
Total	2,359	100	353	100

The fact that grounds are reported with no playgrounds, or with one-fourth or one-half acre, seems to establish the fact that the buildings are not placed to the best advantage for the utilization of play space. In fact, the tendency is to place the school building in the center of the school lot.

On playground apparatus 3,427 rural teachers reported. Of this number 270, or 8 per cent, reported some equipment in this line. The condition is much better in the village schools. Replies from 486 teachers indicate 34 per cent with playground apparatus.

Experimental plats.—This includes small garden plats and larger plats used for experiments in agriculture. The results are based on answers from 3,488 teachers in the open-country school and 402 in the villages. The percentages are as follows: Open-country schools with experimental plats, 8 per cent; village schools with experimental plats, 61 per cent.

Condition of buildings.—The opinions of 3,486 rural teachers and 368 village teachers on the condition of repair of the school building are given on page 60.

TABLE 23.—*Condition of buildings.*

Condition.	Open country.		Village.	
	Number.	Per cent.	Number.	Per cent.
Good	1,123	32	211	58
Fair	1,576	45	115	31
Poor	787	23	42	11
Total	3,486	100	368	100

In the teachers' judgment the rural-school buildings are good in 32 per cent of the schools and fair in 45 per cent. Fifty-eight per cent of the buildings in villages are reported good. The observers were impressed with the generally good upkeep of the school buildings.

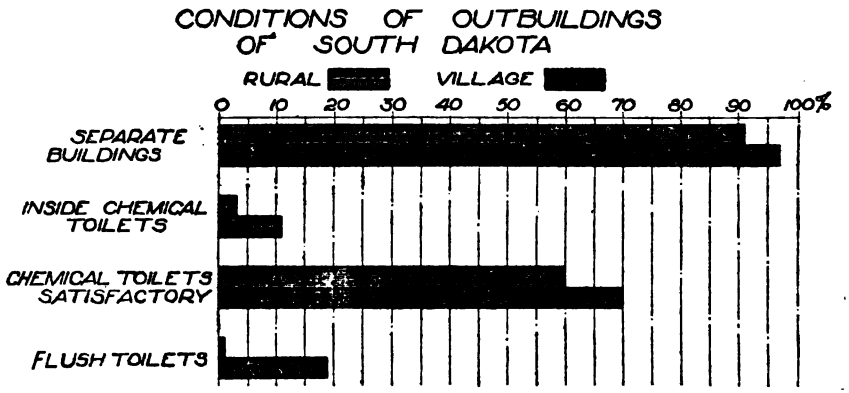

FIG. 11.

Outbuildings.—The data received from the questionnaires relative to outbuildings comprise information concerning location of outhouses and chemical and flush toilets. The tabulations are given below:

TABLE 24.—*Outbuildings.*

	Open country.		Village.	
	Total replies.	Per cent replying yes.	Total replies.	Per cent replying yes.
Separate outbuilding	3,727	91	506	97
Chemical toilets	3,442	3	404	77
Chemical satisfactory	108	60	48	70
Flush toilets	3,230	1	342	19

The prevalent type of outbuildings for open-country schools is to build both boys' and girls' toilets under one roof, and separate

them by a coal bin. No instances of chemical or flush toilets in rural schools were observed by the survey committee.

Lighting.—In measuring the correctness of schoolroom lighting consideration is given to the placing of the windows, to the relation of window space to floor space, and to the presence or absence of shades.

An examination of the data below, which are based on reports from teachers, indicates that 70 per cent of the open-country schools are cross-lighted and that the maximum window placing for village schools is 39 per cent left and rear.

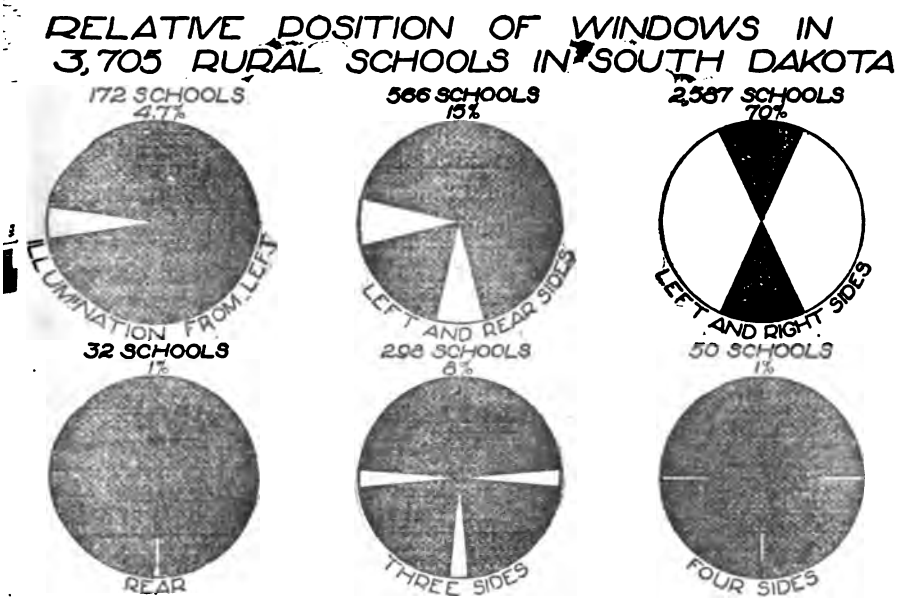

FIG. 12.

TABLE 25.—*Lighting exposure.*

Windo · placing.	Open country.		Village.	
	Number.	Per cent.	Number.	Per cent.
Left	172	5	77	13
Left and rear	566	15	228	39
Rear	32	1	18	3
Left and right	2,587	70	178	31
Three sides	298	8	68	12
Four sides	50	1	9	2
Total	3,705	100	578	100

Replies were received from 3,296 teachers in open-country schools and from 486 teachers in village schools concerning the relation of window space to floor space. These results are as follows:

TABLE 26.—*Relation of floor space to window space.*

Window space vs. floor space.	Open country.		
	Number.	Per cent.	Num
Less than 10 per cent	493	15	
11 to 15 per cent	972	30	1
16 to 20 per cent	814	25	1
21 to 25 per cent	495	15	
Over 26 per cent	522	15	
Total	3,296	100	

A comparison of the above data shows that more than two of the rooms in both open-country and village schools have cient light. The median is 17.12 per cent for the open count 16.6 per cent for the villages.

These estimates of teachers on the lighting in open-country s are quite in keeping with the conditions found by the survey mittee. It is stated in the chapter on "Instruction and super in open-country and village schools" that the observers the lighting unsatisfactory on one or all points in 79 per cent o open-country schools and in 38 per cent of the village schools.

Heating and ventilating.—The replies of teachers on the sub of heating and ventilation are given below:

TABLE 27.—*Heating.*

Means.	Open country.		Village.
	Number.	Per cent.	Number.
Unjacketed stove	1,993	55	114
Jacketed stove	1,323	36	150
Furnace	338	9	306
Total	3,654	100	570

TABLE 28.—*Ventilation.*

Means.	Open country.		Village.
	Number.	Per cent.	Number.
Ventilating system	1,350	36	304
Windows	2,209	58	210
Other arrangement	240	6	37
Total	3,799	100	551

In these answers there is nothing to indicate whether sanitary heating and ventilating plants are included under the term "stove (jacketed)" or "furnace." It is probable that there has been some overlapping in the answers on these two items. The significant thing

in the answers is that more than half of the open-country schools are heated by unjacketed stoves. The observers found heating and ventilating systems or furnaces in 46 per cent of 48 open-country schools and in 82 per cent of 89 rooms in the villages.

It is only natural that 58 per cent of the open-country teachers should report windows as the only means of ventilation. Systems of ventilation in 55 per cent of the village schools are quite identical with 54 per cent of the village schools heated by furnaces.

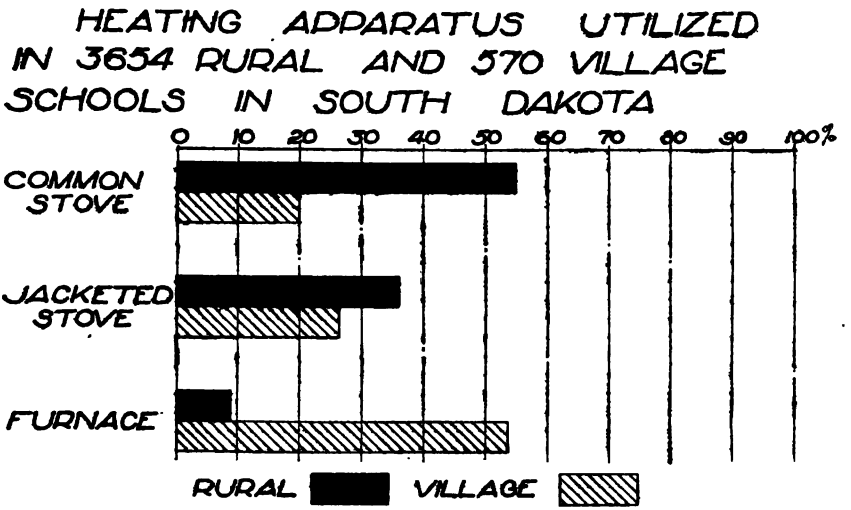

FIG. 13.

Drinking water.—A study of the drinking water includes information on the source of the water supply, its purity, and facilities for drinking. These replies from teachers are as follows:

TABLE 29.—*Source of water.*

	Open country.		Village.	
	Number.	Per cent.	Number.	Per cent.
Well on grounds	286	7	80	14
Neighbor's well	2,030	52	191	34
Spring	102	3	9	2
Cistern	366	9	86	16
Other supply	372	9	151	27
None	779	20	40	7
Total	3.935	100	557	100

The term "other supply" refers to children bringing their drinking water from home in bottles, jugs, or the like. "None" probably means that the pupils are not supplied with drinking water or that the district makes no provision for the same. The observers regretted to find many schools without any drinking water whatever.

According to the teachers' reports 52 per cent of the open-country schools carry the water from a neighbor's well. In a State like South Dakota, where settlement is not close, this often means that little children must carry water a long distance. In cold weather the temptation is to go without it rather than make the effort to go for it.

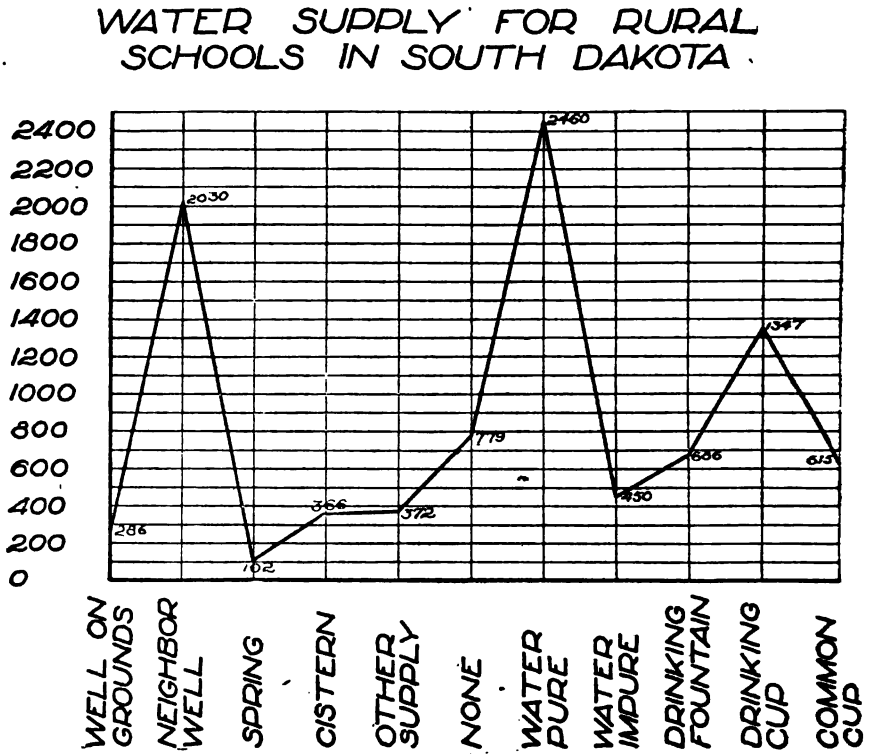

FIG. 14.

Relative to the purity of the drinking water, 2,910 open-country teachers and 359 village teachers gave their judgment. The following figures represent the percentage of teachers in open country and village who believe their drinking water is pure: Open country, 85 per cent; village, 92 per cent.

TABLE 30.—*Facilities for drinking.*

Facilities.	Open country.		Village.	
	Number.	Per cent.	Number.	Per cent.
Drinking fountain	686	25	251	59
Individual cups	1,317	51	157	37
Common cups	615	24	19	4
Total	2,648	100	427	100

The significant thing in the above table is that the common drinking cup is still used in 24 per cent of the open-country schools and in 4 per cent of the village schools.

Janitor service.—Replies were received from 3,674 open-country teachers and 418 village teachers, relative to the employment of janitor. The replies show the following percentages employing a janitor: Open country, 4 per cent; village, 75 per cent.

Three thousand eight hundred and ninety open-country teachers reported that the floor was swept daily. This represents 99 per cent of the entire number of teachers reporting. Only 34 per cent of the village teachers reported in the affirmative to this question. The remainder made no answer whatever. The observers found the floors in village schools in a better state of cleanliness than in the rural schools. The method of sweeping was indicated by 3,783 teachers in the open-country schools and 402 teachers in the village schools. From the percentages given below it seems that in approximately one-half of the open-country schools no dust-gathering material is used in sweeping:

		Rural.	Village.
Dry sweeping	per cent	51	16
Dust-gathering material	do	49	41

As to frequency in scrubbing the floors, 3,511 open-country schools and 432 village teachers reported. These results are given below:

TABLE 31.—*Floors scrubbed.*

Frequency.	Open country.		Village.	
	Number.	Per cent.	Number.	Per cent.
Weekly	75	2	29	6
Monthly	706	20	92	21
Yearly	2,427	69	281	64
Never	303	9	38	9
Total	3,511	100	440	100

The tendency to scrub the floors once a year seems, from the above, to be very pronounced in both open country and village schools. This is evidently a feature of the yearly house cleaning. The method of dusting was given by 2,768 teachers in open-country schools and 399 village teachers. The results of the tabulation are given below:

		Rural.	Village.
Dry dusting	per cent	57	19
Dusted in oil	do	43	24

Equipment.—Information was also received relative to blackboard space and desks as follows: Sufficient blackboard space: Open country, 70 per cent—3,232 replies; village, 85 per cent—431 replies.

TABLE 32.—*Desks.*

Kinds.	Open country.		Village.	
	Number.	Per cent.	Number.	Per cent.
Stationary	3,634	83	433	81
Adjustable	605	17	101	19
Total	3,639	100	534	100
Single	1,909	54	442	78
Double	1,624	46	126	22
Total	3,533	100	568	100

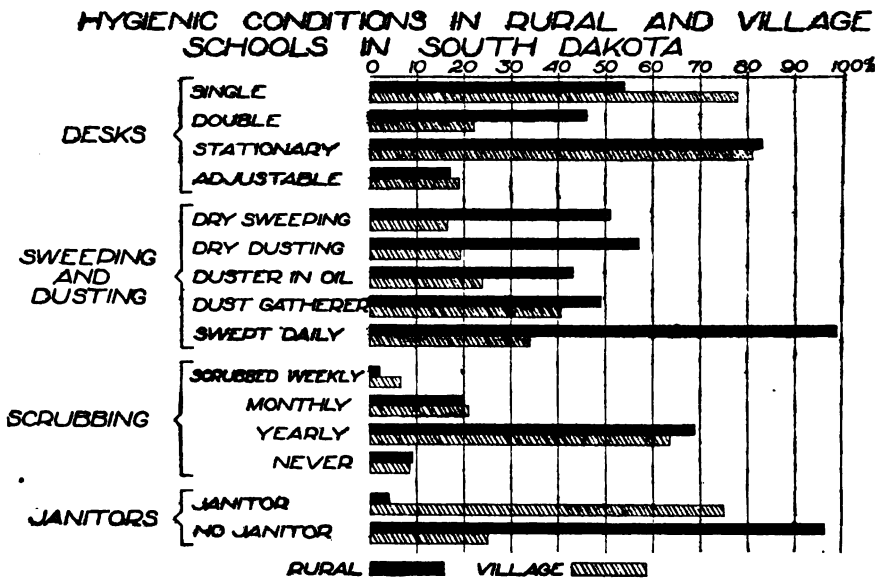

FIG. 15.

The percentage of sufficient blackboard space is somewhat higher than that found by the observer. The teachers reported 70 per cent and the observer 58 per cent for the open-country schools; for village schools it was 85 per cent (teachers), 72 per cent (observer). Probably a difference in standards may account for a part of the range of percentages. The percentage of single seats reported by teachers was also higher than that reported by the observer, viz, open country, 54 per cent (teachers) and 48 per cent (observer); village, 78 per cent (teachers) and 65 per cent (observer).

The existing school plant not meeting public needs.—Interpreting the present study on physical status in terms of highest percentages and medians, it appears that the school in the open country of South Dakota is a small cross-lighted building situated on the traditional acre of ground or less; its relation of window space to floor space is

17.12 per cent; it is heated by a stove; and windows are the only means of ventilation. The outbuildings are separate and outside the building. The source of water supply is from a neighbor's well. Most children have individual drinking cups. The teacher acts as janitor. The floors are swept daily and scrubbed once a year. The desks are stationary, about half and half single and double.

In the towns and villages of 1,000 or less the conditions are better. A larger per cent of grounds contain more than 1 acre; two-thirds of the grounds have experimental plats; about one-third of the buildings are equipped with chemical or flush indoor toilets; lighting is from the left, rear, and left and rear; heating is by means of furnace or sanitary stove; and janitors are employed.

The open-country school plant just reviewed is, with minor changes, the same that served country folk in America 75 years ago. It has been stated in the first chapter of this survey that South Dakota is, with the small exception of the Black Hills area, an agricultural and grazing State. In every village the grain elevators, silhouetted against the sky, bespeak great grain-shipping centers. These elevators are filled with corn, wheat, oats, and rye, harvested from surrounding fields. The soil for these fields is often turned, not by spans of mules and walking plows, but by tractors, with records of 40 acres for a single day. Likewise, the South Dakota farmer is no longer living the isolated life of the farmer of 75 years ago. The rural mail route brings him the daily paper from the metropolis, and after his day's work in the great out-of-doors he may sit in his comfortable home and read of yesterday's events from the battle fields of Europe. With the replacing of the horse and buggy by the automobile, his neighborhood has expanded far beyond the confines of the local school district.

But does the existing school plant meet the public needs? The answer is self-evident. Just as the agricultural plant and its operations of three-quarters of a century ago do not meet the needs of the South Dakota farmers of to-day, so likewise a school plant of a type three-quarters of a century old can not meet the present educational needs of rural South Dakota.

The kind of school plant that will meet public needs.—The consolidated school, which is discussed in the next chapter, is the school best fitted to serve rural people. Such a school is possible in much of South Dakota. In some sections of the State a two-teacher school would represent all the consolidation possible, and still in other localities the one-teacher school must for many years to come be the only school that can serve the people.

The area of the school ground should be large enough to accommodate the school building with its setting of lawn, trees, and

shrubbery; the teacherage and its garden spot; the playground and agricultural plot. The size of the grounds would largely depend upon the kind of school. In no case should it be less than 5 acres. It is highly desirable that grounds be fenced as a protection against stray live stock.

The building should be provided with classrooms sufficient to accommodate both the academic and industrial subjects of the curriculum. The high-school assembly room and adjoining classrooms should be connected with folding doors so that they may be thrown together for community meetings. The difficulty in finding suitable boarding places is everywhere recognized as one reason why many efficient teachers refuse to teach in rural districts. The country can not expect to procure the services of married men teachers when there is no opportunity for them to have a home. The teacherage is as necessary a part of the rural-school plant as is the parsonage a necessary adjunct to the church plant. From a physiological point of view play is as necessary to the child's development as are food and drink. For this reason the school can best serve the child when provision is made for ample playground and play apparatus. It has been suggested in the discussion of the course of study that agriculture and nature study should find a large place in the rural-school curriculum. To teach these subjects effectively there must be a portion of the school ground reserved as laboratory.

All plans for school buildings should be approved by the division of school architecture and sanitation of the State department of education before permission be granted the school board for their construction. The best authorities on schoolroom lighting agree that the light should enter from the left and rear and that the window space, in regions with the latitude of South Dakota, should equal one-fourth of the floor space. Furnaces or sanitary heating and ventilating plants should be used in heating the school buildings. The most satisfactory means of ventilation is that provided by an effective artificial system. The standard heating and ventilating plants, when properly managed, provide effective ventilation. No matter how satisfactory artificial ventilation may be, every possible opportunity should be used for ventilation by doors and windows. For this reason storm windows should be adjusted so that their presence will not hinder window ventilation.

The rural-school privy has long been a source of physical and moral infection. It is usually dirty, with marks of obscenity and considered by possible vandals of the neighborhood as a fit object for depredation. Whenever practicable the toilets should be placed indoors. When there is an abundant supply of well water the flush-tank system can be used. A pressure tank set in the basement or

buried in the ground outside the building can be attached to the pump of the well. A septic tank, buried below the frost line, would provide a sufficient disposition of the excreta. If out-door privies must be used they should be screened and be kept clean and sanitary.

An abundant supply of pure water is as necessary a part of the school's equipment as is an effective heating system. Whenever it is possible to obtain flowing water there should be a well on the school grounds with a pressure tank in the basement and such plumbing arrangements as would make the conveniences of a city water system possible for the open country. There are, however, places in South Dakota where it is impossible to reach underground water. In these localities farmers are often compelled to carry their water long distances. Schools located in such places should be provided with well-filtered cisterns, dug deep enough in the ground to be protected from frost. These cisterns should preferably be set under the building. Where it is necessary to provide water in this way constant vigilance is necessary to keep the cisterns in a sanitary condition.

In the schools of two teachers or more a janitor should be employed by the school board. A janitor's duties should include more than building fires and sweeping floors. They should embrace some knowledge of floor dressings and how to apply them, the use of sweeping compounds, the use of disinfectants, methods of ventilation and cleanliness of floors, desks, walls and toilets. In many one-teacher schools the teacher must, through necessity, act as janitor. When this is the case she should be paid for this extra duty and the school board should see that she be given proper instructions relative to the duties required. School room floors should be treated occasionally to a standard floor dressing, a sweeping compound should be used, and dusting done by means of an oiled or damp cloth.

In order to complete the plant herein described, it is necessary that it be equipped with the proper tools for instruction. These include sufficient blackboard space, maps, and globes, textbooks, supplementary reference books covering all subjects of the curriculum and an abundance of illustrative reference material.

Such a school plant, as has just been discussed, could put into operation a course of study that would serve the needs of an agricultural commonwealth. It could further provide for the all-year school. Well-trained teachers would be attracted to such a school and could there become real rural life leaders.

Recommendations for improved school plant.—The survey committee believes that the time has come for the State to set up definite standards for the one-teacher schools, of which there will be many, for years to come, in the State. The standards must be high enough to make of the school genuine community schools. To this end the

committee recommends State aid (procured through State taxation or legislative appropriation) on the basis of the following standards:

1. That the standard school shall utilize at least five acres of land for grounds and experiment purposes.

2. That every such school shall erect, at community expense, a cottage on the premises for the teacher.

3. That ample facilities be provided for a sanitary water supply.

4. That ample provision be made for the installation of such sanitary toilet and heating facilities as shall be recommended by the State department of education.

5. That the plans and specifications of the schoolhouse and the teacher's cottage, as well as the ground plat and planting scheme, shall be approved by the division of school architecture and sanitation of the State department of education.

Chapter XI.

SCHOOL CONSOLIDATION AND RURAL HIGH SCHOOLS.

If it were possible to reorganize all the small rural schools in South Dakota as strong one-teacher schools of the community type, described in the preceding chapter, there would be little need for consolidated schools. Unfortunately, many school districts are too sparsely settled and are financially unable to maintain such schools. Here consolidation of two or more small schools to form one graded school of two or more rooms is usually the practical thing to do. While school consolidation is resorted to principally to improve rural schools, in this State it should unquestionably be used as a means to assist the many small, struggling village schools, which in reality ought to be classed as "rural," they being mere rural trading centers.

At some risk of repetition, it is said, this great agricultural commonwealth needs schools and educational processes which can reach clear down to the roots of things, strengthening character, teaching the rights of fellow men, loyalty to the Nation, and fear of God; at the same time that they supply young and old people, without distinction, with practical training for successful breadwinning on the land. These requirements are beyond all but the exceptional one-teacher schools, for which there will always be an important place in South Dakota. An important phase of school reorganization will accordingly come through school consolidation.

Brief history of consolidation in the United States.—School consolidation has made little progress in South Dakota, probably because no concerted policy has yet been adopted to encourage this form of school reorganization by means of State aid. The State department of public instruction likewise has not been able to do much to promote interest in consolidation for want of help in the office. There are in the State, at the present time, 32 consolidated schools, some of them consolidations in name only. However, the survey committee has every reason to believe that the people are ready for a change and eager to consolidate their schools if properly directed; but while ready for school consolidation, the State should not be content with anything except the best type of consolidation.

Throughout the country at large consolidation of schools is now accepted as good national policy. About 10,500 consolidated schools have been organized, taking the place of 50,000 one-room schools. But, unfortunately, some of the consolidated schools are little, if any, improvement on the old. In some places rural territory has been joined to industrial towns and the rural children have been offered an education poorly suited to agricultural requirements. In other places the schools are operated in the open country, but utilize courses of study originally planned for city children. Both types are failures. The kind of consolidated school that has succeeded—and there are many thousands of them—is organized either in the open country or in connection with rural-minded village. But in either case the classroom work is organized to meet the actual needs of the children in attendance.

A study of consolidation in South Dakota.—The 32 consolidated schools in this State are mostly village consolidations. Three schools only are located in the open country. Two schools report that they are consolidated in name only, as the consolidation was done for the sole reason of increasing the powers of the board, no new territory being added or other schools included. The initiative in practically every consolidation movement seems to have come from the small villages which have been eager to draw more taxable area to their small village districts. This type of consolidation may or may not be what the rural population requires—depending entirely on how the courses of study are planned, how the school plant is equipped, who the teachers are, etc.

It ought to be stated here that consolidation to be really worth while must be so thoroughly well done that even the patrons farthest removed would have cause to feel that their sacrifice in time and travel is well repaid.

These things must be considered:

Where the consolidated school is centered in a village, it must still remain the school for rural people. To this end provision should be made (*a*) for an abundance of land to be used for gardens and experimentation; (*b*) for a school plant suitable for community center purposes; and (*c*) for teaching subjects required by rural and village population in this particular State.

Recommendations for a future policy.—It is probably well enough that consolidation has not been urged upon the people. The one-room schools of the poorer sort are now about ready to be supplanted by new buildings. This, then, is the opportune time to inaugurate a State-wide policy of reorganization of the one-room schools as modern consolidated schools, or where the latter are impracticable, at least as modern one-teacher schools.

The survey committee recommends:

1. The appointment of a State rural-school supervisor as a member of the elementary school division of the State department of public instruction, who shall devote most of his time to school consolidation.

2. The drafting of a tentative consolidation map of each organized county. The work to be done by the State department of public instruction in conjunction with the county boards of education and the county superintendents.

3. A State policy looking toward establishing: (*a*) Strong one-teacher schools (as discussed in Chapter X) which may later by enlargement of territory become consolidated schools; (*b*) associated or trading center school areas to embrace a central village and a number of outlying schools; (*c*) one county high school of agricultural type in each county in the State, which may, or may not, be one of the central schools of an associated area.

4. Liberal State aid for the erection of the new school plants and for maintenance.

The recommendations explained.—It is important, first of all, to have an expert to direct the work of consolidation who can give his time to it. To illustrate: North Dakota has 447 consolidated schools and South Dakota has 32. The explanation of the startling difference in extent of consolidation in the two Dakotas is simple. North Dakota has had a State rural-school supervisor on the job who has given all his energy to consolidation, and the State has been liberal with State aid for this type of schools. South Dakota has done neither.

It is furthermore highly desirable to plan for State-wide consolidation by platting each county in detail. This would give assurance that all consolidations would be realized systematically, without leaving out small schools here and there.

An ideally organized county would probably have: (1) A number of one-teacher community schools, which should in time, as the population increases, develop into larger open country consolidated schools with two or more teachers; (2) one or more village centers associated with a number of outlying schools similar to the Minnesota associated schools; and (3) one county high school of agricultural type, as outlined below.

The Minnesota plan of association would need little if any modification to meet the requirements of South Dakota. Any rural trading center embraces the central village with its various emporiums of trade and exchange, and all the surrounding country that can conveniently use the village has a clearing house for its agricultural products and as a social center. The schools of such an area, including the central village and outlying rural schools, could then be brought into an association or consolidation for educational purposes. The

whole arrangement would be in charge of the county board of education.

A school system such as this fully developed would contemplate for each "association," the central school, with six grades of work in the associated elementary schools and three years of prevocational studies in the junior high school. This would reduce the time for the "tool subjects" in the elementary schools to the right minimum. One central village or town in each county should be designated as the county high school with six years of work in the elementary school and six years in the upper school, divided into a three-year prevocational course, and a three-year vocational course.

The outlying rural schools should have six-year courses. This would give the teacher opportunity to reduce the number of daily recitations now required and give more time to the beginners. All pupils who complete the sixth year in an outlying school would be promoted to the central school to pursue there their studies during the next three years. The graduates from the junior high school in the central village would be entitled to free entrance to the county high school. This course would return the rural youth to the farm in harmony with it, ready and willing to live happy, remunerative lives on the land.

This county plan of organization would assure unity of purpose and effective supervision of all the schools. The principal of each village center working under the direction of the county superintendent would outline and direct the work in the outlying schools, thus "pointing" the children forward to the central school. The county high school should be organized so that its instructors in English, music, agriculture, home economics, and school hygiene might take turns at supervising the work of the schools.

Special State aid should be offered as an inducement to organize the schools thoroughly. The State might well pay one-fourth the cost of the new consolidated school buildings, provided that in no case should it pay more than $2,500, and, in addition, pay a reasonable maintenance grant, all on condition that the school be erected on or utilize not less than 10 acres of land for agricultural purposes, and in other ways maintain the high standards required by the State department of public instruction.

RURAL HIGH SCHOOLS AND CONTINUATION SCHOOLS

No high-school facilities for the rural population.—The high-school population in the State is 42,655. In 1916 there were enrolled in town and city high schools 8,164 students and in rural high schools and other rural schools doing high-school work, 1,086 students. Of the latter group only about 200 reached the senior year. Certainly

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some of the town and city high-school students come from country districts—probably about 2,000. But the fact remains that altogether too few rural children are able to attend high school and the few who have such advantage do not always get the kind of instruction required by agricultural people. The situation may be stated thus: (1) The number of rural pupils in high-school attendance is too small to influence the standard of culture and intelligence in country districts to any appreciable extent; and (2) the courses of study pursued in the town and city high schools of the State are not well adapted to attract students from agricultural communities.

No lengthy argument is needed to convince anyone that a larger number of rural youth should attend high school. The strong manhood and womanhood in the country can only be measured in terms of educated leadership. School education must produce this leadership, but the school preparing for it will be of quite a different type from the one-room schools which certainly find difficulty in lifting the generation now in school to the degree of intelligent and practical citizenship desirable in modern agricultural life.

The kind of high school that is needed in South Dakota is the sort that can point the way to contented, remunerative agricultural life. When fully organized it will extend its educational facilities to young and old people alike. In this State the school should have the following definite aim and scope: Instruct upper-grade children from the entire county in day courses; instruct youth beyond ordinary school age as well as adults in short courses and extension courses; and instruct illiterates in night-school classes.

A distinctive type of rural high school.—The proposed county high schools ought to be distinctly rural, or they should at least offer the kind of subject matter needed by agricultural people. Many persons, and farmers among them, have the false idea that to differentiate between city and country people in education matters is really to discriminate against country children. This is absurd. There is fundamentally no more reason why country children should attend town schools than to reverse the order and have city children attend country schools. The important thing is to make the rural high school as broadly cultural as any town high school, but a culture intimately related to present and future problems instead of the traditional things. Most important, the course of study must be rooted to the agricultural community and all that belongs to it.

The environment in which the South Dakota farmer lives is the natural background for his course of study. Agriculture must not be taught, as it so often is, as a patch of the old educational cloth; it must become the warp and woof of a new educational garment. The mother tongue, the social sciences, and the new agricultural

sciences will form the nucleus of the study course. And any citizen of the State who has completed the course with credit should be granted admittance to the State college or to the university with full standing, even though he may not have had the language requirements and certain other subjects now required, which have no place in the proposed rural school courses.

Suggestive steps in county school reorganization.—It is not the purpose nor the province of the survey committee to suggest, in detail, the courses of study to be used in the proposed county plan of schools. It will suffice to suggest the desired steps in the organization of the schools, by enlarging upon the outline given earlier in the present chapter.

1. The small one-teacher school: A six-year study plan, devoted chiefly to the "tool subjects" and general culture; but the entire course rooted to the rural environment, through nature study, school gardening, home projects, and general industrial work.

2. The complete one-teacher community school or consolidated school: (*a*) A six-year elementary school plan and one, two, or three year prevocational study courses, according to equipment and teaching force; (*b*) the work in the first six years similar to that in the small one-teacher school. The exceptional teacher in the complete one-teacher school to be permitted to do two years' prevocational work in addition to the six year "tool subjects," provided he has the assistance of a capable wife who can take the sewing, cooking, and other phases of home economics. The consolidated school to offer the six-year elementary and three-year prevocational course if it has three or more teachers, one of whom should be an adept in industrial work.

3. The central village in the "school association." Nine years. Six years elementary and three years prevocational high-school work. In exceptional cases the school to extend the course, contingent on equipment and teaching force.

4. The county high school: (*a*) Six years above the elementary school—three-year junior high school and three-year senior high school; (*b*) the senior high-school course to contain the following studies:[1]

FIRST YEAR.

First semester.	Class.	Lab.	*Second semester.*	Class.	Lab.
English	5	..	English	5	..
Farm arithmetic	5	..	Farm arithmetic	5	..
Physical geography	5	2	Poultry	1	3
Plant life	3	..	Plant culture	2	2
Mechanical drawing	2	..	Mechanical drawing	..	3
Farm shopwork	..	3	Farm shopwork	..	3
			Gardening	..	2
	25 periods.			25 periods.	

[1] This course is outlined for boys only. The work would be quite similar for girls, except that home economics would supplant the purely "masculine" subjects.

SECOND YEAR.

	Class.	Lab.		Class.	Lab.
English	5	..	English	5	..
Mathematics (chiefly mensuration and simple phases of surveying)	5	..	Mathematics	5	..
History and government	4	..	History and government	3	1
Farm animals	2	2	Dairying	2	2
Hygiene and sanitation	3	..	Hygiene and sanitation	2	1
Chemistry	3	1	Chemistry	1	2
	25 periods.		Farm work	..	1
				25 periods.	

THIRD YEAR.

	Class.	Lab.		Class.	Lab.
English	5	..	English	5	..
Physics	3	..	Physics	2	1
Farm crops	2	2	Farm crops	2	2
Feeds and feeding	2	2	Feeds and feeding	2	2
Soils and fertilizers	2	2	Soils and fertilizers	1	3
Farm machinery	1	1	Rural sociology	3	..
Rural economics	3	..	Farm work	..	2
	25 periods.			25 periods.	

Continuation school courses needed.—Two classes of people can be reached by the proposed county high school in addition to the regular students: (1) Young men and women beyond ordinary school age who are obliged to work for a livelihood whose education has been so meager as to handicap them in the struggle for a living; (2) farmers and their wives who are in need of inspiration and practical assistance in their daily work.

South Dakota has many farm youths who, for economic reasons, can not attend high school regularly. The question arises, Shall school facilities be placed within reach of these young men and women, or shall they go untaught? Either the State must establish practical continuation courses or the agricultural sections will fail to reach the maximum of efficiency to which they are capable.

The rural continuation course should form an important part of the work of the county high schools. It can best be organized as short courses for people regularly beyond school age. There should be no maximum age limit. Any person who can profit by the work should be welcome to enroll.

The time chosen should suit the farmers. The courses ought to begin early in November when the fall work is done and should continue for four months or more. To accommodate the farmers who drive to school the hours could be set from 10 a. m. to 3 p. m. For others who live too far from home, or are unattached, residence privileges could be granted at the school.

The daily routine of the short courses would include a general brushing up in the elementary subjects, farm arithmetic and accounts, farm law, special phases of agriculture, blacksmithing, cement work, leather work, farm machinery, carpentry, cooking, sewing, home sanitation, and other subjects of value to rural people.

The county high schools, to do the best kind of work, should have a liberal amount of land—40 acres is not too much. The school

should have dormitory and boarding facilities for a group of students, who could pay their way in farm work. The principal, a man with thorough pedagogical and agricultural training, should live at the school. There should be farm buildings, farm machinery, and a gradual stocking with farm animals suited to the agriculture of the particular district.

It should be clear that the county high school would be a feeder for the State agricultural college, and would in no sense take the place of the higher agricultural school, as has been true in some States where regional and congressional district schools are set up.

Recommendations.—The committee recommends:

1. The gradual development of the county plan of school reorganization outlined in this chapter, including provision for the establishment of one county high school of agricultural type in each organized county.

2. The grant of State aid to all such schools, to be raised by State taxation or through legislative appropriation. (See Chapters IX and XVI.)

Chapter XII.

THE COURSE OF STUDY FOR OPEN COUNTRY AND VILLAGE SCHOOLS.

Requirements of the law.—The course of study in use in the rural and village elementary schools of South Dakota has been revised lately by a committee appointed by the State superintendent and approved by the State teachers' association. The subjects to be taught are designated by law and are as follows: Reading, writing, orthography, geography, language, and English grammar, history of the United States and South Dakota, physiology and hygiene with special emphasis upon alcoholic drinks and narcotics, civil government, drawing, music, agriculture, and moral and humane instruction. In addition the electors of the district at their annual meeting may add to the above list of subjects.

General plan.—The course of study contains an introduction and a separate discussion for each subject. The most important feature of the introduction is an explanation of the plan of alternation by grades and a specified statement as to just what grades in each subject are to be combined and in just what years the seventh and eighth grades are to be alternated. This definiteness in time allotment, on the part of the makers of the course of study, is to be commended. The observers in the rural schools found the suggestions on alternation of grades to be very generally complied with in the eight counties of the State inspected. Answers from 500 questionnaires of rural teachers, scattered throughout the State, indicated that in 66 per cent of the schools classes were alternated and that they were combined in 81 per cent of the schools.

Combination of classes, alternation of grades and classes, and correlation of subject matter are the only means whereby the recitations in a rural school may be sufficiently reduced in order that the class periods may be of reasonable length.

In spite of the fact that so large a per cent of teachers reported classes alternated and combined, the number of daily classes based on reports from 479 rural teachers showed the median number of daily recitations to be 26.65. The following groupings on reports from

these 479 rural teachers indicate that 74 per cent of the teachers conducted from 21 to 30 classes a day:

Classes conducted per day.

	15 or less.	16 to 20.	21 to 25.	26 to 30.	31 or more.
Number	4	44	168	181	82
Per cent	0.008	7.00	35.00	39.00	18.00

Median 26.65 recitations per day.

Observation in the schools showed that this large number of classes was due, mainly, to irregular attendance and to the fact that beginning pupils did not enter schools at stated times throughout the term.

The general plan for the discussion of separate subjects is as follows: A few general statements or a paragraph or more related to the importance of the subject in the curriculum, and a definite outline of the work to be covered for the eighth grades. In the outline of subject matter by grades there appears from time to time a few scattered suggestions on methods and devices, sources of illustrated matter, and list of reference books.

General characteristics.—The subject content of each study is outlined in accordance with the traditional arrangement of the customary textbook. The scheme follows the plan of development of small topics and isolated facts, rather than the grouping of subject matter about central units or large topics.

There is a tendency to get away from this traditional order in the outline in physiology and language. In fact, the makers of the course of study of South Dakota have a vision of the time when the many subjects of our school curriculum will be combined under large central topics. The following is quoted from page 180 of the course of study:

> The next revision of the course of study for the elementary schools of South Dakota will doubtless be an outline in which the work of the grades will be offered in four or five units, each made up of related subjects, the whole including the branches now commonly found in such courses of study; for example, history will include geography, which is one of the factors that determine what the history of nations is to be, as well as civics, which is but a specialized form of history. If such plan is worked out in our next course, language will be a part of the unit denoted English, which will also include reading, grammar, spelling, and possibly writing. In such a course the work in language would be the medium that welds the whole course into a unit.

An illustration from the general topics assigned in the first three grades in history will show how these topics might have been a part of a large central unit. The three topics referred to for the first three grades are Indian life, celebrations and myths, and hero stories.

The makers of the course of study emphasized the fact that these topics were not arranged according to years, but that the teacher should be free to select from them such subjects as she could use. History in the early grades should be a combination of history, civics, and social activities. The three general topics cited above are isolated and lack a central thread. Before studying Indian life it would be better to prepare the pupils by emphasizing the activities of their own environment through a study of shelter, food, clothing, and community activities. Celebrations form a very vital part of the latter. By a study of his own life there has been developed a background for an understanding of the life of the tree dwellers, cave men, and other prehistoric people. Naturally, a study of Indian and Eskimo life will follow. The myths and hero stories selected would be in keeping with the central theme, which should be the study of the activities of the child's environment as a basis for a study of man's activities in the past. All of this historical subject matter of the early grades should, of course, be developed through constructive work, dramatization, song, and story.

Throughout the course of study suggestions are used that mean little to the average teacher. Under the suggestions for art, teachers are told to correlate the work with the subject matter of the course, and yet there are but few definite suggestions as to how it can be correlated with other subjects. Again, under the geography suggestions it is recommended that nature study correlated with language and reading will be all the geography needed in the early grades. Yet there are but few definite suggestions as to just where and how nature study may be correlated with language and reading. In fact, the course of study does not contain an outline on nature study. The term "motivate" is frequently used in a manner similar to that of "correlate."

From the preparation and experience of South Dakota teachers, as given in Chapter XVIII of this report, it is evident that teachers with such meager training could have but little notion of such terms as "correlation" and "motivation." Again, granted they do understand the meaning of the terms, merely stating what should be done would be of little value. The observers found that there was a lack of reference books and other source material in the schools. A teacher with from four to six subjects per day to teach, which are scattered over an equal number of grades, has little time for the necessary research involved in formulating elaborate lesson plans. Even the best-prepared teachers are inclined to follow the textbooks as the line of least resistance. For this reason the course of study should be very specific in its generalizations.

The course of study has emphasized the elimination of much material found in the textbook, now conceded to be of little value to

the child in fitting him for adjustment for the social life of which he has a part. These eliminations are especially noted in physiology and hygiene, arithmetic and language. The minimum and supplementary outlines for seventh and eighth grades history, geography, and language are an excellent feature. The minimum length of school term for South Dakota is seven months. Answers from the 3,923 rural teachers show that 70 per cent of the school terms were less than nine months during the year 1917–18. This being the case, it is very essential that the course of study should present minimum and maximum outlines of work in all subjects.

The further discussion of the course of study will be narrowed down to a summarization of the individual subjects outlined in the course.

Reading.—The term "Reading and Literature" better expresses the subject matter as outlined in the course of study for the eight grades. The subject is introduced by a few paragraphs upon the importance of reading. It is emphasized that the chief aim in the work of reading is to make good silent readers. The paragraphs on aims of reading are followed by a brief discussion of the various methods of teaching primary reading.

Then comes the outline for the work of the individual grades. The subject content of the first three grades is confined to primers, first, second, and third grade readers. Reports from 390 rural teachers scattered throughout the State indicate that 43 per cent of the number of teachers reporting did not have any supplementary reading matter. The answer on this question from the 390 teachers is given below:

Number supplementary readers.	Number.	Per cent.	Number supplementary readers.	Number.	Per cent.
None	165	43	More than 4	45	12
1 to 2 sets	132	33			
2 to 4 sets	48	12	Total	390	100

From the fourth grade on, the course of study very wisely suggests that the business of the subject from now on is reading to learn rather than learning to read. There are suggested lists of stories and poems to be studied. The seventh and eighth grades are encouraged to read current magazines and literary classics. The list of poems and stories to be studied throughout the course is to be commended. Dramatization is emphasized in the early grades, but practically nothing is said of story-telling. Listening to a story told by another affords a valuable training for concentration of thought; the oral reproduction of it gives an ability to think on one's feet, and when the story is read by the pupil himself the

retelling is a test of his ability to gather and impart thought from the printed page.

The hints on how to produce good reading are valuable. Models are presented for the mode of procedure in conducting a primary lesson, for dramatizing the story, in interpretative questions, in teaching a poem, in studying a masterpiece, and in the treatment of the life of an author. It would have been wiser, in the dramatization of "Daffy-Down-Dilly," to have emphasized the fact that the selection of characters, the stage setting, and gesticulation be worked out by the pupils themselves rather than be determined upon by the teacher. Lowell's "Longing," which represents the grief of a parent over the death of a child, can not be comprehended by pupils in the fifth and sixth grades, and is not a wise selection.

The suggestion that masterpieces be first read through for general meaning and purpose is a very good one. The tendency has been in studying classics to dissect them for choice of words and sentence structure, so that the pupils failed to see the story as a connected whole.

Domestic science and gardening.—The suggestions on gardening belong to agriculture and should be included under that head. In the introduction the statement is made that the course is to be correlated with hygiene, yet there are no definite directions as to how and where there might be such correlation. All the work included under canning and preservation of foods and cookery could well be included under the subject of food in the hygiene course.

The course of study suggests that emphasis in domestic science be placed upon sanitation and health. Very definite suggestions as to just how this can be done should be stated in the course of study. Since the hot lunch is so essential to the physical well-being of pupils in the rural schools, and since it forms such a practical feature of domestic science, very definite directions should be given covering the equipment, menus, and serving.

The course of study suggests that instruction in canning be conducted as a home project. The same suggestion is also offered relative to gardening. This might well be recommended for sewing and much connected with the preparation of the hot lunch. In the rural school the home projects of boys' and girls' clubs fostered by the State agricultural extension department should be made a very vital part of the course in agriculture and domestic science.

Agriculture.—In the introductory paragraphs to the subject, attention is called to the fact that no attempt was made to prepare a complete course in agriculture. What was attempted was the formation of an outline on special topics in agriculture, such as weeds, corn, horses, etc. These topics are assigned to months. These outlines do more than mention topics. They give considerable information on the subject matter. A few references are given at the

close of each outline. In these lists frequent use is made of publications from the United States Department of Agriculture and the Experimental Station at Brookings.

There should be in every course of study for rural schools a very full outline on nature study for the lower grades. This nature-study outline should embrace topics contained in the subject matter for all the studies belonging to the science group of the elementary schools which are elementary enough to be taught young children. For advanced grades this nature-study outline should be replaced by a definite outline in agriculture. Definite and adequate instruction in nature study in the lower grades is a necessary foundation for a proper understanding of agriculture.

Bulletins from the United States Department of Agriculture and the State experimental stations should not only be present but should be catalogued, in order that their location may be easy. Children need to be taught how to use these bulletins. Not all material in them is within range of the child's comprehension. To this end teachers need to be most careful in selecting references from them.

The project work in connection with boys' and girls' clubs should be connected with the course in agriculture.

Music and art.—The outline on art is concerned mainly with the fine arts, and is planned with a viewpoint of a school where all grades are represented and where there can be but one period devoted to the subject. There is only a brief allusion to industrial art. Since this is the only space given in the course of study to industrial art, it would have been of practical value to have elaborated much more fully on this side of the subject. In a course of study for schools where several grades are to be in the hands of one teacher, the outline for primary grades could well be covered under the term of the industrial art, leaving the fine arts for later grades.

The music outline is brief and is prepared for schools where there can be only a few minutes a day devoted to the subject. In general it may be said that the music outline attempts more than the teacher's preparation allows her to undertake.

Music and art can not be handled efficiently unless under the supervision of a special teacher. Since the music machines are so popular, the course of study could well give suggestions relative to the educative use of these machines in schools and the type of records to be purchased.

Handwriting.—No outline is incorporated. This omission is explained by the following, quoted from page 56, course of study:

> In view of the fact that the various writing systems adopted for use are explicit as to gradation and corresponding method to be employed, only a very few suggestions will be incorporated herein.

If a definite outline is to be omitted it would be wise to designate one or more standard systems. To leave it to whatever chance methods are adopted is dangerous.

The outline should contain some information on standards in measuring handwriting, and indicate where published measuring tests may be obtained.

Spelling.—The excellent feature of the spelling is that it tends away from stereotyped exercises of the traditional spelling book and emphasizes that only words likely to be written should be learned to spell, that the word should be selected from the pupil's immediate environment and that there be constant watchfulness of the pupil's own spelling through individual lists.

History and civics.—The outline for primary grades has been used in this discussion as an example of how isolated topics might be grouped about a large central topic. A list of topics is assigned for the fourth and fifth grades, which are to be approached through the medium of biographies and stories. South Dakota history is given a place in the last half of the sixth grade. The outlines contain a full list of reference books to supplement the work of the individual grades.

In order to approach United States history effectively in the grammar grades it is necessary that some time be devoted to a few large topics which deal with the great European civilization out of which America has developed. These could well be placed in the intermediate grades. The outlines for seventh and eight grades follow the chronological order of the textbook. The minimum course is to be commended, as it provides an adequate covering of the ground for the short-term schools. It is unfortunate that no list of reference books is given for the grammar schools. For effective teaching of history in grammar grades there should be an abundance of outside material. In fact this should be the main source of content matter, the textbook serving as a reference work and the place in which to study perspective. The course of study should be very explicit as to how the supplementary material is to be used.

The leading criticism of the history outline is that small topics and mere historical facts serve as the center of ideas rather than large units. Much more emphasis should be given to local history. Many historical stories form suitable material for dramatization in the lower grades, such events as the adoption of the Declaration of Independence, and the Constitutional Convention, may be effectively reproduced in the higher grades. Indian lore associated with the early history of South Dakota contains situations desirable for reproduction. Every neighborhood has, in its own history, elements that form the nucleus for pageantry. The course of study should stimulate activity in this direction, showing how the pupils, with the teacher as a leader, may work out these dramatizations.

Civics is allotted from one-half to two-fifths of the history time in the grammar grades. The outline covers local, State, and national civics and follows the order of topics found in the average textbook. The danger in following such an outline is that the subject may be treated too abstractly. Civics to be real to children of the grammar grades must be full of concrete illustrations. It is suggested that civics in the lower grades be correlated with the other subjects. This means nothing to the average teacher, for she does not know how to go about the situation. There should be definite directions showing how to correlate the laws of sanitation, quarantine, and disease with the hygiene courses. The game laws very naturally belong to humane instruction. A study of the forest reserves falls under the subject of geography. Community activities, improvement associations, and clubs of various sorts are a part of history.

Physiology and hygiene.—The excellent feature of this outline is that it emphasizes hygiene rather than physiology. Much that is given could well be placed under nature study and domestic science, organized around problems that have to do with the pupil's interest. The outline for grammar grades is supplemented by habit, germ, and community hygiene, quoted from a recent bulletin issued by the State department of Nebraska. All that is given in the hygiene outline could have been classified under larger topics.

Geography.—No definite outline is given before the fourth grade. It is suggested that the work given before that time be centered about nature study. Frequent illustrations to correlation of subjects with nature study are given throughout the outline, yet, as has been stated, there is no course for nature study. The outline for intermediate and grammar grades follows the traditional geography text, in that it emphasizes small facts and topics.

A well-selected list of reference books is given. This should be supplemented by avenues of source material, which vitalize good teaching. Chambers of commerce in large cities and advertising material of railroad and manufacturing concerns are examples of such avenues.

It is not enough to give list of reference books and material. There should be many suggestions as to how and where to use this outside material. In geography as in history teaching, this outside material and not the textbook should form the principal source of such matter.

Arithmetic.—The introductory paragraph contains suggestions showing how the first year's work in arithmetic should be associated with other subjects and with all the activities of the school. The subject matter is then outlined very carefully, month by month, for all the grades.

The selection of topics is confined to the generally accepted notion of what constitutes practical subject matter in arithmetic. It espe-

cially emphasizes topics to be eliminated. Emphasis is placed on thoroughness, the mastery of fundamental facts and the illumination of abstraction by concrete examples. The outline does not show how arithmetic processes in other subjects may be utilized. More emphasis should be placed upon the ability to size up mathematical situations rather than learning facts and processes.

The outline in the lower grades is interspersed with a few suggestive devices. There should be more suggested games and a list of reference books covering the teaching of arithmetic for all the grades.

Language.—The introduction to the subject emphasizes the correlation of languages with the other subjects of the curriculum. The outline is then given covering the work for each year. In the primary and intermediate grades the work consists of oral and written compositions, picture study, dramatization, memory work, and letter writing. Just what mechanics of language should be taught in each grade is outlined. The delightful thing about the entire course is that technical grammar is everywhere subordinated to composition. Formal grammar is not studied until the seventh and eighth grades. A minimum and supplementary course is offered for these grades. A very complete list of stories and poems for all the grades of the school accompanies the outline.

Recommendations.—The survey committee recommends that the following outline be followed in preparing the next course of study:

1. Subject matter—

(*a*) Grouped about large topics rather than individual topics. The science group to include nature study, geography, physiology, agriculture, home economics and manual training; the history group, history, civics, and some portions of geography; and the literature group, reading, spelling, penmanship, language, grammar, and literature. Mathematics to be in a group by itself as a necessary measure for all the groups.

(*b*) Such a selection of topics within these large units as will be fundamentally important and large in detail.

(*c*) A progressive arrangement of topics.

(*d*) Suggestions to guide the teachers in the adaptation of subject matter to environment.

2. Time allotment—

(*a*) Suggestions for reduction of classes.

(*b*) Several daily programs to fit schools with one or two teachers and from three to eight grades.

3. Material—

(*a*) List of material and names and addresses of firms where such material can be purchased.

(*b*) A well chosen bibliography relating to subject matter. Name and addresses of publishers and price lists.

(*c*) Suggestions for collection of local material.

4. Method—

(*a*) The approach of subject matter through such problems or projects as will furnish proper motivations.

(*b*) Many more suggestions on helpful methods and devices.

(*c*) More lesson plans.

The level of general culture.—The splendid ideals and cultural inheritance of the South Dakotans are responsible for the justifiable demand for a large element of cultural education in all the schools. This can not be overemphasized in these times of materialistic tendencies. While the survey emphasizes agriculture for an agricultural people, it realizes fully that no agricultural population can become really great which neglects the spiritual elements of an education. As will appear in later chapters, the South Dakota people are probably suffering as much to-day for the want of a high level of general culture as they do for the want of technical and practical instruction in agriculture—nor does South Dakota differ much in these respects from other States.

The elementary and secondary schools should be enabled to give a more thoroughgoing instruction in the fundamental elements of an education than most of the schools are now giving. Music and art, literature and language, must continue to hold prominent place in the work of the university and the denominational colleges of the State. At the same time natural and social science and the other subjects that provide scientific knowledge and trained skill must have a proportionally larger place in the schools than heretofore.

Economy and efficiency in school organization and in courses of instruction.—Real economy and efficiency require that the small rural schools be reorganized, so far as practicable, as consolidated community schools. The schools in the rural villages should for similar reasons plan a wholehearted cooperation with the outlying agricultural districts which are utilizing these villages as trading centers. This can best be accomplished by providing courses of study and means of instruction suited to the everyday needs of both rural and village children. Rural high schools are urgently needed—schools organized to meet the requirements of a modern agricultural people. It is equally true that the town high schools should, at an early date, readjust their work to meet more fully the requirements of their South Dakota environment.

The higher educational institutions were organized in the days of early settlement on the borders of the State—chiefly as the result of local demand. A forward-looking State policy in education would carry with it some definite modifications in the prevailing system. It is doubtless unwise in a State like South Dakota, which, as was shown above, requires a comparatively small number of persons to fill the professions other than teaching and the ministry, to maintain, as it now does, in more than one institution, departments or courses intended to prepare students for any one of these professions. This seems notably true of the various forms of professional engineering, for which schools or courses are now maintained in three higher educational institutions. The question of necessary and un-

necessary duplication of schools and courses, will, however, be discussed in detail later. Throughout the study it has been the purpose to keep in mind a State-wide policy of education, to give the commonwealth a type of instruction and study courses dictated by State requirements, fully efficient and economical without being cheap.

Important task of the normal schools and other teacher-training institutions.—The predominance of agricultural life indicates the need for teachers prepared specifically for teaching in rural schools, who can give school children instruction leading to successful agricultural pursuits. South Dakota needs more than three times as many rural teachers as city teachers. This shows clearly what an important task the normal schools, the agricultural college, and other institutions training rural teachers have in this field. The future teachers must have an academic and professional training suited to rural needs and ample to educate the men and women who, in their turn, will furnish the practical aggressiveness, correct outlook on life, and finer idealism spoken of above.

The schools and Americanization of the foreign born.—The world war has opened the eye of the American public to many unwise practices of long standing on the Americanization of alien immigrants. It has been brought home to the people rather harshly that many of the foreign born who were welcomed to American shores and given all the rights and privileges of the native born have never become fully assimilated as American citizens. Lack of foresight of the general public and the Government, failure to enforce ordinary statute law, and neglect to reach the aliens through the right type of education, explain, in some measure, present prevailing conditions. To educate all its people, without exception, is the duty and right of democracy. If the alien has not had these blessings in the country from which he came, it is the duty of the Government to extend the blessings to them now; if they have neglected to make use of the schools organized for them, it is the right of the Government to demand that they correct the deficiency at once. South Dakota has probably ample school law to reach all who have neglected to use the public schools. But the State does not now have the necessary night schools, part-time schools, and other kinds of continuation schools so much needed if the unassimilated adult aliens are to be reached.

Chapter XIII.

HOME ECONOMICS IN THE SCHOOLS OF SOUTH DAKOTA.

Section 1. GENERAL SITUATION.

Introduction.—An American girl is a future citizen of a democracy and, as such, needs the same broad fundamental education that should be provided for every boy. One out of every two girls will be, for a few years, a wage earner for which temporary vocation she may or may not need some special education. Out of every 100 American women, 93 marry. Of these, 87 per cent become mothers and 95 per cent operate their own homes by their own labor. In South Dakota there were listed in the 1915 census 118,110 women employed as housewives; nor did this include all women wage earners who were also home makers. It is evident that a girl's education should include training for citizenship, for home making, and in some cases for wage earning.

Wage earning, which is a permanent occupation for men, is but a temporary vocation for most women. Recognition is now generally given to the need which exists that all girls should receive special training for their life work of home making and motherhood. To afford this training, home economics instruction should be made an essential and required part of every girl's public-school curriculum.

The survey committee is of the opinion (1) that home economics courses should be required for all girls from the fifth to the ninth grades, inclusive; (2) that under certain conditions, where many girls are retarded in their studies, special intensive courses should be offered; (3) that the rural children need this training quite as much as do urban children; (4) that when normal schools accept students from the eighth grade these students should also be required to carry one full year of home economics; (5) that it is right to give university women the opportunity to pursue thorough courses in home economics; and (6) that the conditions upon which the State Agricultural College is founded obligates that institution to maintain for women courses in home economics, in all respects equal in rank and quality to degree courses offered in agriculture and engineering.

Home economics as now organized in South Dakota public schools.—South Dakota has already made good advancement in

teaching home economics in its public schools. Forty-four towns and cities have organized departments of home economics and several consolidated schools have made some effort to introduce certain phases of this subject. Little effort has been made to teach the subject in the one-teacher rural schools, although the State course of study offers suggestions on this subject.

In a few schools home economics is taught in high school only; but the prevailing custom in South Dakota city schools is to introduce either food courses or clothing courses or both in the seventh grade. Five schools report teaching sewing in the fifth grade, and three have sewing in grades below the fifth.

It is customary, in schools giving work in home economics, to require all girls to take this while in the grades and to place home economics on the optional list in the high school.

The size of classes varies from 3 to 38 pupils and in time from 35 minutes once a week in some grades to 90 minutes daily in some high schools. It is common practice to allow only one 45-minute period per week for either cooking or sewing in the elementary grades. Sometimes the two subjects alternate, so that a student sews 45 minutes one week and cooks 45 minutes the alternate week.

Weaknesses in the present system.—The short, infrequent periods now alloted to home economics in the elementary grades is one of the chief weaknesses of the work. It is unfortunate that the work in the high school is usually elective, frequently poorly scheduled, often hampered by the grouping of girls of unequal preparation and by failure in securing cooperation of other departments with that of home economics. These difficulties may be due to indifference or to lack of recognition of the importance of the subject.

Preparation of teachers in home economics.—There were 33 replies to the questionnaire sent to the secondary school teachers of the subject. These teachers were trained at various institutions in the following numbers:

State gricultural College of South Dakota	3
University of South Dakota	5
Stout Institute, Menomonie, Wis	8
Iowa State Agricultural College	2
Kansas State Agricultural College	2
University of Minnesota	2
Milwaukee-Downer College, Milwaukee, Wis	3
Thomas Normal School, Detroit, Mich	2
Valley City Normal, North Dakota	1
University of Iowa	1
St. Lawrence University, New York	1
Columbia University, New York City	1
Yankton College	1
Not designated	1

A study of the record of preparation of home economics teachers for high schools leads to two distinct impressions: (1) That many of them are not graduates of four-year college courses; and (2) that the majority of the teachers have received their training outside of South Dakota, although citizens of South Dakota during their college years.

The first conclusion leads to the belief that home economics will never receive fair consideration from other high school departments until the same degree of collegiate preparation is required for the teacher of the one as for that of the other.

The second conclusion (that many have pursued courses at schools of other States) points to some weakness in the higher educational institutions of South Dakota. It is probable that some of these teachers were residents of other States and came into South Dakota for employment, but there is evidence that many South Dakota young people have not highly valued the training offered in their own State educational institutions.

A further discussion of teacher training in home economics will be found in the chapter relating to the Agricultural College of South Dakota.

Difficulties now existing in the administration of home economics.—The teachers realize the difficulties under which some of them are teaching. This is evidenced by many expressions of their needs in the replies to a questionnaire sent them. The commonest desire is for longer and more frequent home economics' periods in the elementary grades and that the subject shall be required in all high schools.

Many state that they need added equipment and some need better rooms. These are but natural conditions in a young and rapidly growing State, and are deficiencies that should be corrected; but they may be temporary and are not necessarily fundamental.

The lack of adequate educational equipment, reference books, and textbooks can not be so lightly overlooked. The cost of these is comparatively small and the rapid increase in school attendance can not be given as an excuse for either the negligence or the indifference which causes the absence of these minor but important supplies and equipment.

It is not surprising that a teacher giving daily instruction in high school English II, high school English IV, German, botany, physiology, and seventh and eighth grade home economics should be forced to say, "She had read no books since she began teaching." Such a schedule of work is alike unfair to teacher and pupils. It is the most extreme type of waste of human ability and vitality. To prepare adequately five different subjects each evening is too great a requirement to make of any teacher after she has taught five full hours during the day. Such a teacher will wear herself out and break in health

or she will look for another position or settle down to do as little as possible under the circumstances. It is a common fault in South Dakota that the home economics teachers have been assigned to too many other subjects.

Advancement while in service.—Not only must a home economics teacher have adequate preparation before employment, but her growth in knowledge and teaching ability should be continuous while in the service. Her growth is dependent upon the extent and variety of her reading, upon her participation in teachers' associations maintained in her city, county, State and Nation, and in her graduate study at summer schools or during periods of leave of absence.

With but few exceptions the home economics teachers are reading some of the most approved educational books. One teacher states that she has not time to read—a fact that is perfectly evident when her daily schedule is studied.

Twenty teachers are reading the American Home Economics Journal; 10 are reading the Literary Digest, while others are readers of the Independent, World's Work, National Geographic Magazine, Review of Reviews, and Educational Review. This speaks well for the intellectual efforts these teachers are making and will lead to increased efficiency.

All but six of these teachers have joined one or more educational associations. Not so many are members of the home economics associations as could be desired, but it is probably partly due to their newness in this line of work.

The home economics teachers of South Dakota are most of them new in their positions and only just out of school, which may explain why few have carried graduate courses.

Present methods in teaching home economics.—At present almost all food instruction in South Dakota consists of small recipe cooking, the products of which are immediately eaten. A child is not critical of the result of her own labor, nor is she a fair judge of the quality of cooked foods. This method of disposal of laboratory products is objectionable. It stimulates greed and selfishness. Food is wasted if eaten when not needed. There is no stimulus to excel because there is no one to know of success or failure. It is undesirable that children eat at odd times and between meals. The repeated use of very small quantities of food materials fails to give the judgment and dexterity needed in the preparation of family-sized quantities.

Some notable exceptions to this small recipe method were observed. In Aberdeen, Sioux Falls, and Pierre, the students regularly prepare a daily school luncheon, while at Madison and some other places the children bring supplies from home and take the finished product for home use. In all cases the cooked food should meet a

real need and the children should receive the incentive which comes from the approbation of others.

In a few places in South Dakota "model" sewing is given. Handwork with no machine work often remains in the elementary school course. This is not so much the fault of the teacher as it is of the school board which fails to supply sewing machines and suitable rooms for teaching valuable courses in garment making. The use of the sewing machine and the commercial pattern should be taught in the sixth, and each succeeding grade.

To teach neat and effective hand and machine work and also the intelligent choice and preparation of food is desirable, but foods and clothing do not include all of home economics. Almost without exception the school boards and instructors in home economics in South Dakota have overlooked the importance of teaching household accounting, home management, home administration, home nursing and household sanitation. They have ignored the need of careful instruction in personal hygiene. Yet much of home economics is but an intensified study of hygiene. Each course given, be it food, clothing, or home administration, must be based upon certain elemental truths, and must be taught with especial emphasis upon the health aspects of the subject.

Courses of study.—South Dakota devotes six pages of the elementary school course of study to "Domestic science and gardening," but three pages of the six give a mere exposition of home economics subject matter, and as a part of the course of study could be condensed into one quarter page. So far as could be discovered no teacher of elementary grade home economics in cities or towns was following this course, which is denominated "A practical rural school course." No other course is suggested for the use of teachers in elementary grades.

There is no uniform course in home economics for high schools. At present each teacher plans her own course, which under such conditions varies from year to year with the changing of teachers.

Suggested modification and improvements in the organization and administration of home economics.—South Dakota should have a State course of study for home economics in the elementary and secondary schools. This course should progress toward uniform results, but there should be opportunity for adaptation to community and school needs and conditions.

Particular problems should not be required by this course, but definite principles with State-wide application should be presented in orderly and logical sequence.

Such a course when once inaugurated will bring to the service better prepared teachers; it will enable pupils to transfer from one

school to another without delay or repetition of work; and it will make possible adjustment of advanced home economics courses in the State institutions of higher education.

Time allowance on home economics.—The following time allowance for home economics is recommended for all graded schools:

Fifth and sixth grades: Forty-five minutes four times each week or one and one-half hour periods twice each week.

Seventh and eighth grades: Seven 45-minute periods. It is desirable that these be given as three periods of one and one-half hours each and one prepared lesson period, or that two entire half days be given to home economics each week.

If the financial condition of a school community is such that home economics can not be maintained in both elementary and high schools, then it should be supported in the grades alone until there are funds sufficient for a complete course. So many children leave school that it is imperative that some training be given early in the course.

One year of home economics should be required of all high-school girls. This should be in the ninth grade and should be so taught as to be equal to one full unit of work. It may consist of six laboratory hours, two class-room hours, and two hours for study, or it may be given as five double periods weekly, with time taken during these for recitations and discussions. Electives in home economics should be offered in the upper three years of high-school work in the larger city schools. It is probable that much better results will be attained in the smaller towns if efforts be made to make the elementary and first high-school year of greater excellence rather than to multiply courses in home economics for advanced classes.

Textbooks.—Textbooks for home economics teaching should be adopted for elementary schools and for high schools. While it may not be possible to find textbooks that exactly meet the needs of all localities or present material in exactly the order desired by each teacher, it must be conceded that a less-than-perfect textbook, supplemented by notes and assigned readings, carries an elementary or high school student farther along any line than will dictated notes and copied material.

Especially is this true in studies of the type for home economics and with young teachers such as now are employed for this subject. Of 33 teachers of home economics reporting as employed in South Dakota, four accepted their present position since January 1, 1918, 17 during 1917, four in 1916, three in 1915, three in 1914 and two in 1913.

No consistent course of instruction can be maintained without standard textbooks when the personnel of the teaching force changes so frequently.

Content of courses.—Fifth grade: Home economics in the fifth grade should consist of lessons in sewing and in housekeeping. In a well-organized school system all children will have had primary manual arts in the first four grades. They will know how to use scissors and other common tools and will have become interested in the work of their hands.

From the first lessons in sewing, there should be presented a definite purpose for every effort they are taught to make. It is at this age that a girl readily learns to crochet, knit, make tatting, and work designs in cross stitch. All sewing during the fifth grade will be by hand. It should be on small problems, that each may be completed before the child becomes weary and discouraged.

Children interested in dolls may be given problems in doll garments, but usually the child of 11 or 12 prefers making something of actual use. Too often the intelligence and ability of a child is underestimated. If given a task worth while she is interested and will learn quickly. The girls should sew for 45 minutes three times each week. Dexterity is developed, and the speediness with which their problems are completed stimulates the student to further effort. There is little to cause wonder that girls failed to enjoy sewing when they had but one lesson in two weeks, and were able to see few results after many weeks of periodical effort.

If possible, the sewing in the fifth grade should be given by a special teacher. There are, occasionally, grade teachers who are deft in the use of the needle and really enjoy teaching sewing, but usually the room teacher is less efficient in this line than in her usual work. There is opportunity to correlate sewing with several other subjects in this grade. The result is an increased interest in each.

The function of sewing instruction in the grades is first to familiarize the child with the tools used and to develop manual dexterity. This, with instruction concerning the growth of cotton and flax, the life of the silkworm, and simple weaving processes, is about all that can be accomplished in the fifth grade.

One-fourth of the time for home economics in the fifth grade should be devoted to housekeeping. Few mothers would choose cooking as the first part of home-making to be taught eleven-year old girls. Rather, the natural method of introducing a child to home making, is to teach her to make a bed, set a table, clear off a table, wash dishes, dust furniture and arrange household articles in an attractive manner. Less judgment is required in the discharge of these duties than in food preparation. The more immediate tangible results appeal to the younger child.

Equipment for teaching home economics will not be considered adequate if there be only tables, sewing machines, commercially made cooking desks and cooking utensils. In order to teach home making

by means of bed making, table setting, dusting, etc., it becomes essential that there be a bed to make, a table to set and a room to arrange and dust.

A small house, an apartment or a teacher's dining room or rest room becomes part of the essential equipment for the satisfactory teaching of home economics.

Sixth grade.—The sixth grade home economics course should consist of sewing and food preparation.

The sewing teacher should review the methods taught in the previous year, making applications to new problems. The introduction to the use of the machine and of the commercial pattern belongs in this second year of sewing.

The problems chosen should again be small enough to be completed in reasonable time. The articles made should be such as the child, or some member of the family or other person can actually use.

In the food preparation class the housekeeping lessons of the fifth grade should be reviewed and ability developed to follow accurately a simple recipe, to combine the ingredients and to regulate the heat in the ordinary processes of cooking.

This cooking should be with small quantities. Because of the inexperience of the child, some poor products and some food waste are inevitable. The small quantities used reduce the waste to the minimum, at the same time making easier for the child the manipulation of the materials and the use of the cooking utensils. The time allowed for food preparation lessons should not be less than 1½ hours. This makes possible the completion of the processes involved in the preparation of any dish, affords time for explanations and inquiries by the teacher, and gives opportunity for nice dish washing and kitchen cleaning, as well as time for orderly serving and eating of the food.

Seventh and eighth grade courses.—Many children leave school without entering the high school. Recognizing this and also that in the early adolescent period girls are more interested in all that relates to household matters than in their earlier years, the seventh and eighth grade home economics should receive especial stress.

The technique of food preparation, garment making, and housekeeping should be perfected and, in addition, a broader comprehension of reasons for processes and the relation of the study of home problems to other subjects should be developed. Food study should be correlated with arithmetic, agriculture, geography, and language. Garment making with geography, arithmetic, language, and drawing.

In all cases the articles produced by these classes should be for actual use and should meet some existing need. Personal adornment should not be the incentive for sewing nor selfish satisfaction the motive for food preparation.

The sewing may be for personal use if the garments are needed. The problems chosen should be such as the community life makes desirable. Not only should garments be made, but their cost in material and time should be computed and the comparison made between the ready-to-wear and the home-made garment.

Elementary home nursing, home sanitation and household accounting should be taught during the seventh and eighth grades. Practical experience in buying should be given so often that an ability to discriminate and judge of foods and fabrics may be developed.

Upon the completion of the eighth grade of school work certain attainments should have been reached by all girls. Besides ordinary scholastic accomplishments they should be able to do certain things for themselves and their homes and should understand the relation of their home to the community.

A girl of fourteen or one having finished the eighth grade should be able to choose and purchase the material for her own plain clothes and to make her own undergarments and wash dresses; she should have developed a pride in the care and repair of her own wardrobe; she should know how to assist in the household and should enjoy having the care of her own room; she should be able to plan a simple meal economically, purchase the foods and cook and serve the same in an expeditious and satisfactory manner.

Cooperation of the mothers with the efforts of the teachers is necessary in order that the pupils may have encouragement at home to practice that which is taught at school. It is doubtful if school credit in home economics can be given for home work. Credit for home work presupposes frequent supervision, and to do this in home economics there is necessarily an intrusion upon the privacy and personal problems of the home. This, no school official has a right to attempt. Uninspected home work with school credit is eminently unfair. The honest mother and daughter will suffer in comparison with those of more elastic consciences, and the daughter of a mother with high standards for workmanship will be at a disadvantage with those whose mothers' ideas of excellence are lax.

High school home economics.—The ninth year at school should complete the required home economics work. After the ninth year there will need to be, in the larger cities, elective courses. The student pursuing a commercial course can not afford more time for home economics training, neither can the girl who has a reasonable expectation of being able to enter a college or university or normal school. The young woman whose future is undetermined, or who will probably remain in her home, may well elect a four years' course in home economics, and for her these elective high school courses may be established.

The ninth grade or last year of required home economics study should be based upon the previous four years of grade work. It should be a survey course equivalent to one full unit course and should be allotted the equivalent of daily double periods. Foods, clothing, hygiene, and home administration should divide the time. Each may be given the equivalent of one-half of one semester of class time with the laboratory periods equally divided between garment making, food preparation, and housekeeping. Local school conditions may well determine whether these subjects shall alternate throughout the week, or occupy all the time of alternate weeks, or be assigned to seasonal periods. In general, it is most desirable to give the practical work in sewing in the first nine weeks of the fall semester and the last nine weeks of the spring semester, thus leaving the 18 mid-year weeks for food preparation. If the teachers in charge of this work are broadly and well trained such a plan works well, but if the teachers are over specialized and can teach only foods or only clothing, then it will be necessary to alternate the classes so that all teachers may be continuously employed.

Laboratory food products should be used in the school lunch room and for teachers' lunches, receptions, dinners, etc.

Supplemental paid help will be needed in any lunch room supplying 50 or more lunches per day.

It is here suggested that the sewing course shall be based upon the assumption that the students know how to do plain hand sewing, use a commercial pattern, and operate a sewing machine and are acquainted with different fabrics and weaves.

There should be a review of handwork, machine work, and commercial pattern use by some simple problem such as the making of a gingham garment for a child.

A further review of the above and also the choice and application of trimming can be given on a problem such as the making of a muslin gown. Since the use of the electric motor for home sewing machines is becoming common, the use of a motor-driven machine should be taught at this time in the course.

An advanced knowledge of color, design, and textiles may be developed by the problem of a serge school dress or the remaking of a woolen dress or skirt.

There should be at least one problem involving cleaning and, if possible, dyeing.

There should be one problem consisting of work for others rather than for self. This might, for the present, well be for the Red Cross, Belgian Relief, Associated Charities, or for local needy children.

One or more general problems necessitating the cooperation of all members of the class should be required. This may be rug making,

quilt making, hemming household linen, or making costumes for some school play. Ability to work well with others and happily for others is a characteristic so desirable that no school should fail to develop this in every way possible.

Unless the teaching of home economics functions in the home life of the students it is of little value. A student in clothing should be more suitably clothed with garments kept in better repair than one without this training. The value of courses should be evidenced by more simple, conservative and appropriate garments chosen and worn by the students.

A similar development of taste and judgment should be evidenced in regard to food, house furnishing, and housekeeping.

The mastery of technique results in greater pleasure in accomplishment.

Whether a girl elects business, industrial, or academic courses, she will always need the instruction received in the required home economics courses.

When a business woman, her training will have prepared her to buy suitable clothes and to care for them; to select proper food to maintain her body at a maximum degree of efficiency; and so to control her environment that her surroundings may not imperil her health.

Elective high-school home economics course.—Elective high-school home economics courses should be paralleled by science courses which become required courses for all students electing the home economics. These science courses should be chemistry, physics, biology, and physiology. In addition to these, there should be a required one-year course of advanced art for all students pursuing the elective home economics course.

This elective course may well include advanced dressmaking, advanced foods courses, invalid cooking, lunch room cookery, household sanitation and administration, and the home care of the sick.

The above-suggested courses do not include trade training for women. Many of the industries in which women are employed are evolutions of household employments, but home economics instruction can be considered only as a prevocational training for these wage-earning vocations. A demand for special trade courses in the high school of South Dakota in the near future and the maintenance of such instruction is made possible by the Federal vocational education law.

Home economics in the consolidated rural schools.—Consolidated rural schools need neither less home economics nor home economics of a quality different from that here recommended for the city or town school.

The instruction should be presented from a different point of view. The problems selected should be chosen because applicable to local rural conditions but the fundamental principles underlying home-making apply alike to city and rural homes.

An illustration in regard to the variation of the instruction in home economics could be illustrated by lessons upon vegetables. In the city questions of purchase and storage in small quantities would precede discussions as to use, while in the rural school questions of home production and storage in large quantities would be considered before questions of use.

Sanitary milk supplies, laws relating to marketing milk, etc., would be taught in towns; but in the country the production of sanitary milk, its care, handling, storage and use would be stressed.

In towns city water systems would be considered, with general water sources and supplies incidentally taught, while in rural communities the source of water for farm homes, the preservation of the purity of same, the storage of household water, and the introduction of water into the house would be especially emphasized.

In town the municipal methods of sewage and waste disposal would be discussed at length, with minor consideration for the household disposal of waste materials.

In the country, where each householder becomes responsible for the sanitary conditions surrounding his home, greater care in teaching sanitation would be necessary.

In the grades from the fifth to the ninth, inclusive, town and country children should receive the same number of hours of instruction, and one group should not have a better course than the other, but all should have their lessons correlated with their life experiences and especially adapted to their environment.

Home economics in the one-teacher rural school.—The girls of the one-teacher school merit as much and as good training in home-making as do their more fortunate friends who have the opportunity of attending a graded school. It is manifestly impossible for one teacher to teach all grades and all branches with the same emphasis and with the same efficiency as could eight teachers each in charge of but one grade. Hence home economics courses must be modified and adapted to meet the conditions of instruction existing in one-teacher schools.

There are three ways by which the subjects relating to home-making may be taught: (1) By the school teacher employed in the school; (2) by a special teacher shared by five or more schools; and (3) by certain women in the community. This last arrangement is known as the "Crete plan" because first effectively used at Crete, Nebr.

In certain sections of the United States there is a fourth possibility of the rural girl acquiring special information concerning household arts. Where there is a well-organized "farm bureau" with a special woman in charge of clubs for women and girls much good instruction can be given in sewing, cooking, and food preservation in connection with these clubs. At places the local teachers have been retained during the summer vacation period and employed as sub-agents in club work, thus continuing the relationship of teacher and child throughout the year.

When the school system of South Dakota is reorganized and all employed teachers are adequately prepared, it will be possible to require that every rural teacher have some home economics training. Until that time the best that can be secured for the rural child taught by the local teacher is conscientious teaching from a good textbook on home economics subjects.

As elsewhere stated home economics includes the study of sanitation, foods, clothing, and household management, as well as other subjects. The theoretical instruction in regard to sanitation and foods is needed equally by boys and girls in rural homes. Instruction in these two subjects should be given in alternate years to the pupils in the seventh and eighth grades, but sanitary practices should be insisted upon at all times. Each day will offer opportunities to stress the right use of foods.

Manual arts in the four lower grades leads naturally to sewing for the girls of the fifth and sixth grades and elementary agriculture for the boys of these grades. A little time spent daily upon these studies or a longer time on Friday afternoon makes steady progress possible.

Home work in these subjects may be required and graded, but must be tested by skill in tasks done at school before school credit can be given. Without the cooperation of the parents of the district it is almost impossible to attain completely satisfactory results from home economics instruction in the one-teacher school.

By dividing the time of a special teacher of home economics between several schools, most effective teaching of both agriculture and home economics is made possible. By this method the special teacher relieves the regular teacher of half of the pupils and enables her to give special instruction to the section remaining with her.

The "Crete" plan of teaching home economics depends for its success upon the cooperation, ability, and good will of the women of the district. Each woman in the school organization agrees to meet a group of the girls at certain times. The girls go to the homes for their instruction. The woman who is an expert bread maker teaches bread making; the expert milk and butter woman teaches that sub-

ject; the woman who is most successful with meats or soups or desserts agrees to instruct in her specialty; while those women who are experts in needlework give their services to the neighborhood girls at stated times.

When the county agents, working under the Smith-Lever Act, have time and facilities for the organization and systematic instruction of rural clubs, and when this club work can be progressively maintained for a series of years, much good instruction in certain phases of home economics can be given the rural girls.

The special teacher, the adoption of the Crete plan, and dependence upon club organizations all involve so many different factors that they are the exceptional rather than the usual methods of securing home economics in the one-room school. The means most often effective will be found to be the willing teacher supplied with a good textbook and making full use of the opportunities offered of connecting instruction in foods and sanitation with the daily service of a hot lunch.

The older girls will learn to assume responsibility in the management of the lunch and the procurement of supplies. The girls next in age will learn simple lessons in correct food preparation in cooking the articles needed. The younger girls will learn nice methods of dish washing, and orderly methods in doing the necessary after-lunch work, while all students, both boys and girls, will be taught cleanliness, orderliness, and good manners if the lunch is rightly managed.

A very few minutes given each day to lessons on the lunch will insure all this if the school authorities supply an abundance of good water. Little of value can be taught regarding sanitation in a dirty school house to unwashed and thirsty children.

Many arithmetics now base their lessons on practical problems relating to home life and various industries. Bookkeeping is made interesting by application to home and farm management problems. By correlating language lessons, geography, arithmetic, bookkeeping, and agriculture with the study of the problems of the home, all are made more interesting and of more permanent value. By these means home economics can contribute to the future efficiency and well being of the rural child educated in the one-room school as well as to the graded school children.

School lunches.—The administration of the school lunch is a legitimate part of the duties of the home economics teacher. As elsewhere discussed this lunch is a means of disposing of the food-class products.

During the more bitter cold weather a hot lunch at noon for the elementary children, with a shorter midday recess and an earlier dismissal, would be the most desirable in all town schools. In the early

fall and spring there would be little demand for a school lunch, except in high schools, one-teacher rural, and consolidated schools. In these latter the lunch is needed at all seasons of the year.

The noon lunch accomplishes but half of what is possible when it merely provides food. Personal cleanliness, order, good table manners, consideration for others, and intelligent choice of foods may all be taught through the school lunch. The cooperation of principal, room teacher, and home-economics teacher is necessary for the fullest success. The home-economics teacher must not be expected to give full time to class teaching and have the responsibility of the conduct of the lunch added to her labors.

Time allowance must be made for this extra work, and the teacher should be given opportunity to give at least one 20-minute lesson each week in each grade room on the subject of selection of foods, and the effect upon health of incorrect food habits. By these means the school lunch will become educative and can be related to other subjects of the school curriculum.

Home nursing.—Instruction in home nursing in either town, consolidated rural schools, or one-room rural schools is necessary and should be included in all curricula. This teaching is done best by a trained nurse, if such a person is employed by public authorities or local school boards. When the services of a trained nurse can not be secured the home-economics teacher or the classroom teacher should give this instruction, and also lessons in first aid for all students, both boys and girls.

Courses for boys.—All men and boys need a knowledge of the general facts concerning foods. They should know how to select suitable foods when buying at hotels or restaurants; the effect of incorrect or badly prepared foods upon the health of the consumer; and they also need to know much about the sanitary handling and transportation of foods.

The general information suggested can be given in connection with courses in hygiene. The courses in the technique of camp cookery should be offered as electives in the eighth grade and first high-school year, and special out-of-school classes in camp cookery should be provided.

Teachers of home economics in public schools.—Elsewhere in this report the training of teachers of home economics will be considered in detail, and the relation of normal schools, colleges, and the State university to the teachers of home economics will be fully discussed. No high-school teacher of home economics should be employed who has had less than full college or university training. She should have at least a bachelor's degree. If teachers are employed to teach home economics in the elementary grades only, this requisite training should be not less than the equivalent of two years of standard col-

lege or university courses. Teachers of home economics for schools of the open country should have in addition to the above-required preparation good courses in general agriculture, and should have actually lived upon a country homestead.

The pay of home-economics teachers should be the same as the pay of other teachers for whom a like amount of preparation is required.

Supervision of home economics.—South Dakota should have attached to her staff of officers connected with the State department of education a supervisor of home economics. This woman should be broadly educated and should have a wide experience in public-school work. If South Dakota can not at present afford to maintain such an officer at the State department of education, then some instructor in home economics at the State agricultural college should be appointed to discharge the duties of State supervisor of home economics, giving not less than one-half of her time to inspecting the work done and advising the teachers in their departmental organization.

This latter arrangement has the advantage of closely linking the college and the State teaching of home economics, and if properly administered will strengthen and broaden the work in both spheres.

Section 2.—HOME ECONOMICS IN THE STATE NORMAL SCHOOLS OF SOUTH DAKOTA.

PRESENT STATUS.

Introduction.—Home economics courses are now offered in all four State normal schools of South Dakota, but in none of these is this work required. Because of other studies which are required and because of the manner of scheduling these courses, only a small proportion of the normal students enroll in home economics. This condition is unfortunate.

Rural school-teachers need a knowledge of foods, clothing, and sanitation for their own well-being. They must choose their food intelligently that they may retain their health while in charge of the schools. They must dress comfortably, healthfully, and attractively while at work. They must select surroundings that are sanitary and safe. Without knowledge of these subjects their value as teachers is materially lessened and not infrequently effective school service is sacrificed because of ill health.

The normal-school graduates teach in rural and elementary schools, where all information possible concerning conditions which affect health is needed in order that the teachers may instruct their pupils and assist the mothers of the community in maintaining good physical conditions among the school children.

For these reasons and others discussed elsewhere in the report, it is regrettable that so few students at the normal schools are able to avail themselves of the excellent courses offered in home economics.

State Normal School at Madison.—At the Madison Normal School the department of home economics is in the basement of the practice school building. The rooms are well lighted and large. There is an office, a large laboratory, dining room (also used as classroom), a sewing room, and storeroom. While the arrangement is not ideal and all necessary courses in home economics can not be properly given without some additional space and equipment, the present conditions are good and with relatively small expenditure could be made satisfactory.

Home economics is required for all girls in the practice school from the fifth to the eighth grade, inclusive. It is an elective for all women students in the normal-school course and is now approved for all students in the tenth grade, but owing to the present schedule of classes it is difficult for the students to register in home economics. Only two double periods per week are now assigned to home economics for normal-school students. This is too small an allotment of the time for such an essential subject.

State Normal School at Spearfish.—The department of home economics is housed on the third floor of the main building, in rooms with low ceilings. The equipment is in good condition and is suitable for the use of the older students, but is not well adapted for children the size of those in the practice school, who now utilize these rooms for their cooking and sewing classes. Rooms and equipment should be provided elsewhere for these children, and the courses should be arranged to conform to the recommendations made for elementary and secondary school home economics. At present, cooking and sewing are required in alternate years in the training school, beginning with the fifth grade and continuing through the eighth. Cooking is given in the fifth and seventh grades and sewing in the sixth and eighth.

Students in the normal school are not required to study home economics, though they may elect courses 1 to 8, inclusive. If they so desire, they may elect a full four-year course. The number choosing this longer course is negligible, though the courses are well planned and well taught.

State Normal School at Springfield.—Home economics at the Springfield Normal School is taught under the worst conditions imaginable. The rooms assigned to the use of this department are in a cellar basement. The equipment is inadequate, and sanitary conditions are bad. The rooms are poorly lighted and ventilated. It is not strange that few students were registered for this work. The same teacher is employed in sewing, cooking, and drawing. She is

naturally unable to give to any of these subjects the amount of time and care necessary to satisfactory teaching.

The village school of Springfield is used as a practice school for the normal-school students, but as home economics receives so little attention at the normal school, its relation to the practice school is at present of no importance and is unrecognized.

Northern Normal and Industrial School at Aberdeen.—Home economics at the Aberdeen normal school is in high basement rooms, easy of access and adequately equipped for home economics as now administered. Although this is an "industrial" school, no home economics is required. Agriculture is required in many of the school's courses for both men and women, and the question naturally arises why the coordinate subject of home making has not been similarly considered.

The classes in home economics at the Aberdeen normal school are all small. Three times as many students could be accommodated in the rooms now in use if the courses were properly scheduled. Additional space should be granted for home economics classes and extra equipments supplied. This will be discussed in the following pages.

Recommendations for improving home-economics courses, teaching, and equipment in the four normal schools.—Home economics should be required of all women in attendance at the State normal schools. Students entering from eighth-grade elementary schools should be required to carry one full year of work in this subject during the ninth grade, or first year at the normal school. Students entering from higher grades should present credits for high-school work equivalent to the year's course in the normal schools or be required to carry a full course of home economics during their first year of attendance at the normal schools. As hereinbefore stated, these courses are valuable, first, because they equip the student for more healthful and efficient living; second, because they contribute to her preparation for her own ultimate occupation of home making; third, because as a teacher of rural or elementary schools she must be able to guide and direct her pupils to a knowledge of good, sanitary living conditions and the better management of household affairs.

This required course of a year in home economics should include the study of food, sanitation, clothing, and household management. Two hours daily should be scheduled for this. Textbooks should be used, so that there may be the minimum loss of time in note taking and copying. This course is not intended to be a preparation for teaching any phase of home economics. This point should be made plain to students and to patrons of the school. Up to and through the ninth year of school work home economics is a service subject and a legitimate part of every girl's course of study. It is part of her preparation for a healthful and efficient life.

The above recommendations are applicable to all normal schools in the State. The following recommendations apply only to each institution as specifically named:

Recommendations relating to Madison Normal School.—It is not the function of this institution to prepare teachers of home economics for either the elementary or high schools. The eastern part of South Dakota has the agricultural college, an institution which rightly assumes the authority for the preparation of high-school economics teachers.

The Madison Normal School would render a fine service to the State if it would arrange a course of five double periods per week for all ninth-grade students, in the nature of a survey course, including lessons in foods, clothing, sanitation, and household administration.

This normal school should also require all its students above the ninth grade to take a course in school-lunch management, first-aid work, and simple home nursing. These subjects are especially needed by rural teachers and should be so scheduled that they may be completed before the end of the tenth school year. Courses in these subjects should also be offered in the summer sessions, so that experienced rural teachers may increase their efficiency by pursuing them.

The practice-school home economics should be made to conform to the recommendations made for the organization of the subject in the public school curriculum. The seventh and eighth grade classes should prepare most of the food now served for the noon lunches and the tenth-grade students should do the marketing for, supervise preparation of, and direct the service of these noon lunches.

The department is otherwise in a good condition of organization and control. All new bulletin and periodical materials are made available for the use of the students, and a high standard for administration is maintained. To continue and increase this efficiency it is necessary that liberal appropriations be made for the support of home economics in the Madison Normal School.

Home economics in the Spearfish Normal School.—This normal school is the only teacher-training institution in the western half of South Dakota; hence it must serve the needs of most of the teachers of that section of the State. It is accordingly recommended that a course in first aid and home nursing be required in addition to the ninth-grade work suggested for all normal schools and the tenth-grade course in lunch preparation. The school should also be authorized to offer elective courses in home economics for the preparation of elementary and rural home economics teachers. These courses should be of not less than four years' duration.

The practice school should make provision for practice teaching in this subject, and equipment for the elementary pupils should be installed in or near the practice school. Provision for the service of

a hot lunch to the children should be made to give the normal-school pupils experience in this work.

Home economics in the Springfield Normal School.—The normal school at Springfield lies in a section of South Dakota well supplied with institutions that give teacher training in home economics; accordingly this department should be considered a "service" department in this normal school, and its courses should be planned for the general education of the students. No elective courses should be maintained; only one year of required home-economics study and one term of special work should be established. These courses are similar to those suggested for the Madison Normal School, discussed elsewhere in this section.

The home-economics department should be removed from its present quarters. It is suggested that for the next few years one of the large, well-lighted rooms of the science hall be placed at the service of the home-economics department, with the understanding that later special rooms be allotted to home economics in the proposed new wing of the main building. If it is found impossible to place the home-economics department in a room of the science building, it is suggested that a convenient dwelling house be rented by the board of regents and that the present equipment, together with needed additional equipment, be established in such rented house.

The existing close connection of art with home economics is most desirable, but at present the proper administration of these interrelated subjects is complicated by the inadequate teaching force. At least one additional teacher should be added to the department.

Home economics in the Aberdeen Normal School.—The course of study at this school is entirely elective and too closely follows that usual college course, planned and organized with no other purpose in view than to bring into the course, at some time, a sample of each type of home economics work. The home economics department at this school has three functions to perform:

1. To prepare young women for efficient living;
2. To prepare teachers of home economics for rural and elementary schools;
3. To provide vocational home economics courses for girls who have no near-by school upon which they can depend to provide this instruction.

The course in the ninth grade, recommended for all of the normal schools, will provide the training for the first. For the proper performance of the second and third functions, the school must establish carefully planned new courses.

The normal school authorities who formulated the normal school courses should bear in mind that a majority of the students in the

normal schools will return to rural communities. Home economics courses should be arranged and administered with special stress on the rural phases of the problems presented.

Food production, food storage, food values, and desirable food combinations should not be taught as subjects of minor importance in a course which stresses mere technique. The study of textile fibers, cloth production, the value of ready-made garments, the selection of suitable designs and colors, and the care of clothing are of more importance than the manual skill required for the fabrication and decoration of garments. Rural water supplies, rural disposal of household waste, small heating systems, home lighting plants, and the healthful control of home environment are more valuable to the students than extended lessons on municipal filtration plants and the abatement of city nuisances. Rural people must wait for a physician, and are subject to many accidents requiring first aid. Rural children should be free from infectious diseases because of the ease of isolation. Knowledge of the prevention of disease, first aid, and home nursing are necessary parts of all education for rural life. Hence in building an elective home economics course for the Aberdeen Normal School, these conditions should be kept in mind. The entire curriculum should be designed to prepare the student for satisfactory administration of the rural home.

The present equipment for teaching home economics will continue to be needed. It should be supplemented by a suit of rooms for practical household administration, or by a cottage for that purpose. If a model farmhouse is built on the campus of the normal school, the arrangement would be ideal if this were given as a practice home for the advanced classes of home economics students. Attached to this should be a garden, chicken house and yard, bee stands, and a barn to supplement class work with practical experience.

When a model consolidated rural school is built at this normal school, home economics should receive special attention. This would afford practice teaching for the home economics students and would give experience in management of noon-day lunches.

SUMMARY OF RECOMMENDATIONS.

1. All the normal schools should establish a required course of home economics to be taken during the first year of attendance at the normal school.

2. A special course in hot-lunch management, first aid, and elementary home nursing should be provided and made compulsory for all tenth grade or second year women students in all the normal schools.

3. The Madison and Springfield Normal Schools should not extend their courses beyond the two lines of work above recommended.

4. The Aberdeen and Spearfish Normal Schools should supplement the above-required courses by elective courses for elementary and rural teachers and for prospective home makers.

5. The salaries of home economics teachers should be increased in all the normal schools, and the home economics teaching corps should be enlarged.

6. The home economics department at Springfield should be removed from its present location, which is extremely objectionable, to better quarters.

7. The equipment and rooms at the other schools should be improved and enlarged.

8. Each practice school maintained at the State normal schools should be specially equipped with food and clothing laboratories and with provisions for practice in school lunch management.

Chapter XIV.

INSTRUCTION AND SUPERVISION IN OPEN COUNTRY AND VILLAGE SCHOOLS.

Section 1. INSTRUCTION.

Mode of procedure.—This discussion is based upon careful observation of 238 recitations in 83 rural and village schools visited. Usually, the survey committee was accompanied by the county superintendent. In two counties the Red Cross public health nurse was a third visitor in some of the rural schools inspected. The visitors took inconspicuous seats and there was no deviation from the regular program. In schools where there was to be a talk and inspection by the public health nurse the school program continued through two or more recitations before the nurse began her work. If the road conditions and distances made it possible the survey specialist then moved on to another school.

The physical condition of the room was given consideration. In one school the observations concerning the recitations were not recorded because the room was too cold for comfort. Parts of recitations were also eliminated. Only those lessons listened to under conditions as nearly normal as possible are included in this report.

The grade, subject matter, treatment of lesson by the teacher and the reaction of the pupils were observed. Very full notes were taken, the visitor recording almost verbatim all that was said or done on the part of both pupils and teacher throughout the recitation. For the time being no account was taken of the children at their seats unless they became a disturbing element to the recitation in question.

Physical conditions and equipment.—It is quite necessary to take into consideration the physical conditions under which these lessons were prepared, and something of the equipment with which the teacher and pupils worked. The results of these summarizations are given in the following tables:

TABLE 33.—*Physical conditions in open country and village schools visited.*
(Based upon observations in 48 rooms in the open country and 80 in the village.)

Items.	Open country.		Villages.	
	Number.	Per cent.	Number.	Per cent.
Clean walls	18	38	28	35
Well chosen and well framed pictures	16	33	35	44
Single seats	23	48	58	65
Some seats ill fitted to pupils	27	56	20	25
Unsatisfactory lighting	38	79	30	38
Heating and ventilating system or furnace	22	46	73	82

TABLE 34.—*Equipment in open country and village schools visited.*

(Based upon observations in 48 rooms in the open country and 89 in the village.)

Items.	Open country.		Villages.	
	Number.	Per cent.	Number.	Per cent.
atisfactory maps	25	52	.....	.....
atisfactory globes	17	35	.....	.....
ufficient blackboards	23	58	64	72

A study of the above tables indicates that approximately one-hird of the rooms in both town and country schools visited had clean walls and well-chosen and appropriately framed pictures. It was generally noted that the pictures were hung too high. Single seats were found in a little less than half of the rooms in the open country schools and in nearly two-thirds of those in the village schools. More than twice as many children were seated uncomfortably in the rural schools as in the village schools. Unsatisfactory lighting includes cross lighting, front lighting, insufficient lighting, and lack of shades. These bad lighting conditions were found in 79 per cent of the rural schools and in 38 per cent of the village schools. It is noted that heating and ventilating systems or furnaces were found in less than half of the rural schools visited. In rooms heated by stoves the floors were usually cold and the air vitiated.

Summarizing the results of these observations on physical conditions in the schools visited, it was found that on every item, except clean walls, rooms in the villages and towns ranked higher than those in the open-country schools. In this discussion on instruction consideration must be given to the fact that many recitations were listened to in unattractive rooms, that some children were seated uncomfortably and that rooms were common where lighting, heating and ventilating were unsatisfactory.

An examination of Table 34 indicates that over one-half of the rural schools studied had satisfactory maps and that there were satisfactory globes in a little more than one-third of the rooms. Exact data on this subject were not taken for all the rooms inspected in the villages. It was observed that there was a satisfactory set of maps and a globe in practically every town school, so that if there was an inadequate supply in individual rooms it was possible to borrow this equipment when the occasion demanded.

The blackboard space was either insufficient or in unfit condition in 42 per cent of the open country schools and in 28 per cent of the towns visited. Exact observations were not made relative to reference material in these schools. In general it may be said that the observers found a lack of reference books and illustrative material.

Length of recitations.—In the discussion of the course of study it has been stated that the number of daily recitations in open country schools (based upon reports from 479 teachers) was 26.65. The school law of South Dakota defines a school-day as five and one-half hours, exclusive of intermissions. This makes only 12 minutes as the average length of a recitation.

Actual time was kept of the length of the recitations in 62 classes observed in one-teacher schools. The results are grouped below:

Length of recitations

Classes.	4 to 6 minutes.	7 to 9 minutes.	10 to 12 minutes.	13 to 15 minutes.	[illegible] minutes.
Number	15	14	28	4	[illegible]
Per cent	24.00	23.00	45.00	.064	[illegible]

Median, 10.21 minutes.

It is not surprising that the recitations should be so short when the number of classes were more than 26. The above grouping shows that 92 per cent of all the recitations were 12 minutes or less; 24 per cent lasted only 4 minutes. The minimum length of time was 4 minutes and the maximum 16 minutes. The median was 10.21 minutes. Of the five recitations 4 minutes in length, four were in spelling and one in first-grade arithmetic. The 16-minute recitation was in reading. The three 15-minute recitations observed were in music, arithmetic, and reading.

Nearly one-half of the recitations, upon which this discussion on instruction is based, were in the open country schools. In judging the type of instruction consideration must be given to the fact that the median length of recitations for approximately one-half of the classes observed was but little over 10 minutes.

Lesson assignments.—The lesson assignments were, in all but a few instances, given very hurriedly at the close of the recitation. Careful notes were taken relative to the assignments of 83 recitations. Their character is indicated below:

TABLE 35.—*Lesson assignments.*

Items.	Number.	Per cent.
Page or lesson simply indicated	55	[illegible]
A few details mentioned	17	[illegible]
Assignment by pupils	4	[illegible]
Carefully prepared assignments	7	[illegible]
Total	83	[illegible]

These expressions of teachers, taken from the field notes, very clearly characterize the type of assignments in 55 or 66 per cent of these 83 recitations:

"Take to page 155." "Same lesson to-morrow"; "Typhoid fever next time"; "Blackie in the trap, next"; "Learn 'The Last Leaf"; "Begin with Stonewall Jackson and finish the chapter"; "Spell the next list"; "Work all the problems in the next exercise."

The few details given in the 17 lessons consisted of indication of words from the reading text whose meaning was to be looked up in the dictionary; mention of the topics of the lesson; reading of the advance lesson by the teacher; and designation of drawings to accompany the lesson.

In four instances the children were making their own assignments. In three of the cases the reader had been completed and the members of the class were choosing their own selections for review. The visitor noted that considerable interest and rivalry were aroused in determining the selections for the next lesson. In the fourth instance the class resented the length of the teacher's assignment, with the result that the amount the pupils thought they could master was accepted by the teacher.

The lesson assignments were carefully prepared in only seven of the 83 assignments noted. In two of the seven lessons outlines upon the board were copied with instruction that the future lessons follow the routine. Careful instructions were given concerning two lists of sentences to be prepared, and the remaining three cases were arithmetic lessons given to supplement the topic in the textbook.

The significant thing in this study is that carefully planned lessons were observed in only 9 per cent of the 83 recitations. To know how to study is a fine art. Good instruction implies such direction on the part of the teacher, in the preparation of a lesson, as will teach the pupils how to weigh values, and see the lesson in the perspective of their own environment. All this is a part of the lesson assignment. Sometimes it is necessary to expand it to the length of a study lesson that will occupy the time of the entire class period.

Number and grade distribution of recitations observed.—This status of instruction in the rural and village schools of South Dakota is based upon observations of 283 recitations. Tables 36, 37, and 38, which follow, show the subjects in which the recitations were observed and their grade distributions for the open country schools, the village schools, and both open country schools and village schools, respectively.

TABLE 36.—*Recitations and their grade distribution observed in open country schools.*

Studies.	Grades.								Total.	Per cent.
	1	2	3	4	5	6	7	8		
Agriculture								1	1	[illegible]
Arithmetic	2	5	4	2	2	1		3	19	[illegible]
Civics								2	2	[illegible]
Geography			1			2		1	4	[illegible]
History					2	1	1	3	7	[illegible]
Language and grammar				1	3	3	1	3	11	[illegible]
Physiology			1	1	1	2		1	6	[illegible]
Spelling		2	1	2	1	1	1	3	11	[illegible]
Reading	16	8	13	7	3	3		2	52	[illegible]
Total	18	15	20	13	12	13	3	19	113	
Per cent	15.00	14.00	17.00	12.00	10.00	12.00	3.00	17.00		[illegible]

TABLE 37.—*Recitations and their grade distributions observed in small town schools.*

Studies.	Grades.								Total.	Per cent.
	1	2	3	4	5	6	7	8		
Agriculture								1	1	[illegible]
Arithmetic	2	2	3	3	1	2	1	4	18	[illegible]
Civics								4	4	[illegible]
Geography				4	4	6	1		15	[illegible]
History					1	3		4	8	[illegible]
Language and grammar		1	2	2			4	2	11	[illegible]
Physiology					2	2		6	10	[illegible]
Spelling		2	5		2	2	1	1	13	[illegible]
Reading	16	11	5	5	5	1		1	44	[illegible]
Total	18	16	15	14	15	16	7	23	124	
Per cent	14.00	13.00	12.00	11.00	12.00	13.00	6.00	19.00		[illegible]

TABLE 38.—*Recitations and their grade distribution observed in open country and small town schools.*

Studies.	Grades.								Total.	Per cent.
	1	2	3	4	5	6	7	8		
Agriculture								2	2	[illegible]
Arithmetic	4	7	7	5	3	3	1	7	37	[illegible]
Civics								6	6	[illegible]
Geography			1	4	4	8	1	1	10	[illegible]
History					3	4	1	7	15	[illegible]
Language and grammar		1	2	3	3	3	5	5	22	[illegible]
Physiology			1	1	3	4		7	16	[illegible]
Spelling		4	6	2	3	3	2	4	24	[illegible]
Reading	32	19	18	12	8	4		3	96	[illegible]
Total	36	31	35	27	27	29	10	42	238	
Per cent	15.00	13.00	14.00	11.00	11.00	12.00	4.00	20.00		100.00

It will be noted by an examination of Tables 36 and 37 that the number of recitations observed were quite evenly divided between open country and village—113 for the former and 124 for the latter.

A study of the tables shows that more recitations for both open-country and village schools were observed in reading than in any other subject. This is explained by the fact that in the early primary grades reading is practically the only subject pursued. Arithmetic classes were second in rank for both the country and town. This is easily explained by the large time allotment to arithmetic in the course of study. The distribution was quite evenly divided among all other subjects listened to with the exception of agriculture.

A further examination of the accompanying tables shows the recitations observed were quite evenly scattered through all of the elementary grades. A few more recitations were observed in the eighth grade for both town and country. The first grade was second in rank. In the rural schools and in the rooms in small towns where several grades were handled it was customary to combine grades. Where this condition was found the observers recorded the recitation as belonging to the highest grade represented. The plan of alternation of grades outlined in the course of study indicates that the eighth-grade work is given in the year 1917–18. This explains the small percentage of classes observed in the seventh grade.

Lessons in domestic science, music, and penmanship are not included in this tabulation for the reason that they could not be recorded as belonging to any one grade. Instruction in these subjects is discussed under the respective heads.

Summarizing the above it may be said that the number of recitations observed was about equal for both the open-country and town schools, that more classes were observed in reading and arithmetic than in any other subjects, and that the distribution for the grades was about equal.

Plan of treatment.—The 238 recitations observed are discussed under the individual subjects. They follow the order given in Tables 36 and 37, with the alphabetical insertion of subjects that concerned the school as a whole. The high-school subjects are dealt with separately.

Agriculture.—There is something significant in the fact that, in a State where the primary occupation is farming, out of a total of 238 recitations there should chance to be only two recitations in agriculture. One of these was listened to in the mining section of the Black Hills. The lesson was merely the reading of an elementary text in agriculture. The teacher explained that she was using it as a supplementary reader. There was one pupil in the class, a girl, who read the text fluently. The lesson was on "Selecting seed corn" and "Weeds." The teacher asked a few questions on each section. The questions were such as stimulated thought on the part of the young girl, and her answers were, in turn, unusually intelligent. When

asked if she had learned anything about corn that would apply to her garden she quickly replied, "Nothing; because you can't raise corn here."

This eighth-grade girl did not need to be reading this agriculture text as a supplementary reader. She read fluently and should not have wasted the class time in the mechanics of reading. What was given in the text on "Selecting seed corn" could well have been supplemented by laboratory tests in germination. This lesson was given at a time when the newspapers were full of the alarming conditions arising over a scarcity of seed corn, yet not a word was said of existing conditions.

In the second instance, topics in agriculture formed subjects for composition once a week in the seventh grade grammar. On the day of this observation the subject was "Hogs." Each pupil had selected some one type as a subject. Information had been gleaned from reference books at school and farm newspapers at home. Each pupil had illustrated his composition with a picture of the particular type of hog in question. These pictures were taken from farm papers. At the beginning of the hour the papers were passed about the class and comments were made on their general appearance. Such comments as these were heard: "Good agricultural picture." "Picture not pasted on neatly," "Picture not cut out well," "Paragraphs not indented," "'Jersey' misspelled." A pupil was then sent to the board to write the list of lard and bacon types of hogs. These lists were given by the children, and any misspellings were corrected by them. After the various types were placed upon the board the teacher called upon individual pupils to read their compositions. The following were read: "Poland China," "Duroc Jersey," "Tamworth." At the close of each reading the pupils discussed the features given or brought out points not mentioned. The children kept their papers and handed them in to the teacher after they had made their own corrections.

The most pleasing thing about this lesson was the initiative exhibited by the pupils. All the time the teacher stood in the background. She had directed them how to use information gathered from various sources.

Arithmetic.—Of the 37 arithmetic lessons observed, 25 were drill lessons. These are classified as follows:

Unprepared for subject matter	13
Unnecessary subject matter	3
Reviews	5
Interest keen and varied	4
Total	25

The children were unprepared for the subject matter in 13 of these drill lessons either because the work attempted was beyond their comprehension or because subject matter, dependent upon that upon which they were concerned, had not been mastered. An example of the former was a class of second-grade children attempting examples in multiplication involving a multiplicand extending into the thousands, and a multiplier of two figures. Examples of the latter were found in the primary and intermediate grades, where children were presumably working for skill in the fundamental operations and were handicapped because the 45 combinations and the multiplication tables had not been mastered.

The unnecessary subject matter noted was tedious drills upon Roman numerals. The children were writing these numerals to heights seldom used in daily life. Again, they were changing long lists to their Arabic equivalents, and vice versa. The acquirement of all the information needed upon Roman numerals, by children in primary grades, should be an incidental rather than a fundamental feature of instruction.

There seemed to be no aim or purpose in the five review lessons. The time was consumed in counting or giving a few problems covering each of the fundamental operations. Much that was asked for was that in which the pupils were already proficient.

That the interest was keen and sufficiently varied could be said of only four of the drill lessons. In one instance the class was divided into two teams, the goal being the least possible time that a set of multiplication problems on a chart could be solved. In another case a drill on number combinations was kept alive by means of a guessing game; in a primary class the boys and girls were opponents in a relay counting exercise; and a class in decimals were expressing the decimal read in two ways.

In 11 of the lessons the pupils were solving problems involving principles already learned. In all but two instances these problems were taken from the textbook. The two exceptions were problems dictated by the teacher. Three classes solving problems in denominate numbers were accompanying the solutions with representative drawings. One class was discussing whether the matting for a room would cost less to be laid crosswise than lengthwise. In this instance a chance was lost to discuss the artistic effect in laying the matting. In another instance a distance problem that troubled all the class was reasoned out by means of a drawing made by the teacher from suggestions by pupils. In the remaining six lessons the only aim seemed to be the answer in the book.

Only one class was observed where a new subject was introduced. The subject was plastering, painting, and kalsomining. This lesson

opened with a discussion of the rules of business regarding the elimination of doors and windows. The dimensions of the room, in which the pupils were seated, were estimated and the process determined by the class. The problem was then solved by the class.

Instances were common of lack of attention during the recitation. There was seldom blackboard room to accommodate all of the class. Sometimes those at the seats were instructed to do their work on paper. Even when this was done it was difficult to keep them at work. More often those at the seats were not assigned any task while the group at the board were working. All this waste of the recitation time could have been avoided by making definite requirements for those working at the seats.

Since nearly 70 per cent of all the arithmetic lessons were drill lessons, there was not the opportunity afforded to note how much the arithmetic lessons would function in real life. The matting problem and the kalsomining problem did touch the personal experience of the children; but there were not enough lessons where the application of a principle was involved to draw a conclusion from the teaching observed. This information had to be gleaned by conversation with the teachers and a study of the course of study. It would seem from these sources there was a noticeable lack of appeal to application of arithmetic to the environment of the child. The glaring defect in the instruction was a lack of mastery of the machinery necessary to calculation. This defect came in the primary grades.

Civics.—Five of the six lessons observed were oral and one was written. Two of the five oral lessons were upon departments of the Government, one upon juries, one on the powers of Congress, and one on the plan of nominating President and Vice President. The subject of the written lesson was the duties of the Secretary of State. In every case the textbook was the sole source of subject matter. In one instance the pupils reinforced the lesson topics by current events. This, apparantly, had not been assigned, but it just happened that certain current topics had a bearing upon the subject matter under discussion. In four instances it was difficult to get answers from the pupils on the lesson in hand. In one class of 16 only three pupils took part in the discussion. This was about the ratio of answers from the other lessons observed. In two, of these four lessons, the class was not held wholly to the topic assigned. Questions were asked which wandered far from the subject matter in hand. It may be said that the interest of the children was aroused in these foreign topics. This was because the information was within the range of their comprehension.

To the observer it was clear that no advance plans were made by the teacher for these lessons. There was not the slightest evidence of assignment of outside reading matter, of outlines to be developed by

the pupils, or deductions of abstract principles of government from concrete examples. It has been inferred in the discussion of the syllabus, relative to civics, that the danger in following such an outline is that the subject may be treated so abstractly as to be beyond the pupils' comprehension. This defect was clearly demonstrated in the lessons observed.

Geography.—Nineteen lessons were observed. In only one instance was the subject matter handled in such a way that the pupils used their initiative and drew their own conclusions relative to geographical phenomena. In this case the children developed their own definitions of surface features from models they had reproduced in the sand table. In 11 lessons the sole requirement was to be able to reproduce the textbook assignments. In two of these cases a portion of the class time was taken in reading the lesson text. In only three of these 11 recitations did all the children seem interested and able to clearly comprehend the descriptive matter of the text. These exceptions were due to the fact that the teachers in charge were able to state their questions in such a way as to connect the subject matter with knowledge already in possession of the pupil, thus making it possible for the lesson to be intelligently digested.

There were only two instances observed where the subject matter was gained from sources other than the textbook. One was the sand-table lesson, and the other was a story about Turkey read by the teacher from a book of travelogues. The visitor had not listened to the previous lessons where Turkey was discussed, but was present when the story was read and found the children much interested in listening to the reading.

Two lessons were review lessons. In one the questions had been assigned from a list of review questions on geography that was in the hands of the teacher. The other lesson was an aimless review; the questions had not been assigned, and there was no order or sequence in the questions asked.

In two recitations the teacher did not hold to the lesson topic assigned, but wandered into fields far distant from the question in hand. One example was where the lesson assignment was the New England States. The only questions asked on the assignment were the position, boundaries, and names of the New England States. Then the lesson switched to the boundaries of the United States, and before the class hour was ended the discussion had touched Ben Franklin and his lightning rod, the cotton plant, and wool production.

In the table on equipment, given in the early part of this discussion on instruction, it is noted that there were satisfactory maps in 52 per cent and satisfactory globes in 37 per cent of the rural schools visited. In the geography lessons observed, the visitor noted in-

stances where maps and globes were at hand and not used, and when their introduction would have greatly elucidated the topic under discussion. An example was a recitation where the following question was asked: "What part of the United States has the same longitude as Ecuador?" A series of guesses were made and the question left with a wrong answer, yet just above the teacher's desk was a new suspended globe. There was only one recitation where maps were used intelligently. In this a question arose concerning the area of Germany. With the aid of maps, the areas given in the index, and the scale of miles, the pupils determined that it was about equal to that of Texas.

Summarizing the results it was found that a reproduction, on the part of the pupils, of the descriptive part of the text was the way in which geography was taught. There was almost a total lack of appeal to reference books and illustrative material. Maps and globes were not used to their capacity. The tendency was to wander from the topic in hand.

History.—Fifteen recitations were observed. These were all from grades five to eight, inclusive, and were concerned with narrative history. In two lessons the subject matter was approached through an outline submitted by the teacher. While there was no source of subject matter in these two lessons other than the textbook, the children were being trained to intelligently organize the material in the textbook. The remaining 13 lessons were formal, stilted repetitions of what the textbook said. In two instances the children read the lessons, and a few feeble questions were asked by the teacher after each child had read. In two lessons the pupils were not able to answer the questions submitted, and the time was occupied by the teacher in reading the lesson from the text. Only on three occasions was there anything to relieve this monotony. One was when the teacher asked for a comparison between Revolutionary War taxes and the war taxes of the present time, and the other was a supplementary report submitted by a pupil. Once a map was introduced to further clinch the question under discussion.

The same tendency to aimless reviewing was noted here as in the other subjects. Usually the first two or three questions were concerned with a review of the previous lesson, then the questions wandered far away from the topics in hand.

Only 2 of the 15 lessons observed were carefully planned in advance. Outside of these lessons the history teaching consisted of a perfunctory repetition of the material found in the textbook. There was a noticeable lack of reference to material outside of the textbook.

Home economics.—The observers found in their inspection of 82 rural and village schools 8 instances where hot lunches were being

served. Four of these were in villages and four in the open country schools. One of the village teachers had three months' preparation in domestic science and taught six daily recitations. Two of the rural teachers had some training in the subject. In only two cases were there separate rooms where the lunches could be prepared, and these rooms were used for other recitations. In the other instance the cooking was done in a cloakroom or the assembly room. In only one place was there running water available. In three schools the water had to be carried by the pupils from a near-by well; in the remainder of the schools the children brought their drinking water from home in bottles or jugs. In such schools melted snow was all the water available for cleaning purposes.

The course of study suggests that special emphasis should be placed upon sanitation. In only three instances where hot lunches were served was there an atmosphere of cleanliness and orderliness. The visitors were present on three occasions where lunches were served, and in none of these instances did the pupils wash their hands either before or after the lunch.

There were 3 schools out of the 82 visited where sewing formed a regular feature of the program. In these schools there was no instruction in cooking. Two were in villages and one in the open country. In one, a consolidated school, the sewing teacher had just been added. The sewing class comprised two sections made up from girls in grades 3 to 10, inclusive. One-half day per week was allotted to the work. The teacher was a graduate of Stout Institute. In the other school 75 minutes per day was given to sewing for girls in the high school only. The visitor was present at this class and had the opportunity to inspect the program for the year. The sewing course was confined to fancy lingerie. This teacher's preparation consisted of a few weeks in a summer school. Quite a large number of the schools in both the country and village were making a beginning in sewing and knitting under the supervision of the Junior Red Cross.

The significant thing in the observation in home economics in these 82 schools inspected was that only 11 schools, or 14 per cent, were giving any instructions whatever in the subject. Answers, on provisions for hot lunches, from 500 teachers scattered throughout the State, indicate that only 79, or 16 per cent, had any provision for serving lunches. Replies from 500 teachers in rural schools scattered throughout the State indicated 185, or 37 per cent, of the teachers giving some instruction in either cooking or sewing or both. This percentage is considerably higher than that noted by the observer. It is highly probable that this difference is due to the fact that Junior Red Cross activities were counted as regular instruction in sewing.

Summarizing the results of observations and replies of teachers it may be said that instruction in home economics in the rural and village schools of South Dakota was limited. It was obvious that there were not the proper facilities for housing such courses, that the difficulty of obtaining water, the crowded curricula and the untrained teachers made the solution of the problem complex.

Language and grammar.—Twenty-two lessons were observed in language and grammar. Thirteen of these were in formal grammar and distributed among the grades as follows: Eighth, 6; seventh, 3; and sixth, 3. Six of the language lessons dealt with the mechanics of English and three were concerned with written composition. In 14 of the lessons in formal grammar and the mechanics of English the textbook was the source of the subject matter. The other five lessons were selected by the teacher to supplement the work of the text or the outline submitted by the course of study. One of the composition lessons was based upon a picture study, a second was the reproduction of a scene from Robin Hood, and the third was on fires, the themes being suggested by the lessons outlined in the fire prevention pamphlet issued by the State fire marshal.

The tendency to review was noticeably common. One entire period was spent in an aimless review of the parts of speech, another teacher started a review on the parts of speech and then switched it to the properties of verbs. It was not unusual to use a few minutes at the close of the lesson in review. These reviews were not built about the lesson assigned and were evidently used to fill in the gap of a lesson that was finished too soon. They were clearly an evidence of the lack of a carefully planned lesson.

There were two instances where a subject, new to the class, was introduced. In one case the children approached the new subject matter by being given 25 minutes to study their definitions. In the other instance the mode of procedure was thus: The teacher read a list of masculine nouns and the children were asked to write the opposite gender upon the board. As they proceeded discussion was free about how these words were differentiated. Later the children formed their own definitions for indicating the gender of nouns.

The course of study explicitly states that the seventh and eighth grades are the place for formal grammar, yet out of 22 lessons observed there were three instances of formal grammar in the sixth grade. From observation of the recitations in language and grammar and from conversation with teachers concerning the subject it was apparent that below the sixth grade far more attention was given to the mechanics of language than to story telling, dramatization and oral and written composition. It was very evident that these lessons in language and grammar were not carefully planned.

Manual training.—There was equipment for manual training in five of the schools visited. Four of these schools were in villages and one in the country. Replies from 500 rural teachers, representative of the State, indicated that 67 schools, or 13 per cent, were provided with equipment for instruction in manual training. Difficulty in housing the course, crowded curricula and teachers with but little training in the subject and numerous other branches to teach offered the same complex situation as that found in home economics.

Music.—Of 56 open-country schools visited, 30 had a piano or an organ and five had victrolas. What music there was in these schools consisted mainly of singing, as a feature work of the general exercises. Three teachers were found giving the technique of music; two of these were in the open country and the other in a village school. There were two instances where children were singing nursery rhymes and dancing folk dances to the victrola. In 26 villages there was, at least, one musical instrument for every building. In most cases there were from two to five instruments in the building. Seven musical machines were noted in these 26 village schools observed. The character of the records was inspected in seven schools. These selections could be classed under the following heads: Popular and patriotic airs, a few selections from the classics, regimental band pieces, and nursery tales and folk songs.

Instruction in music is required by law in the State of South Dakota. However, teachers in the open country schools are not refused a certificate for inability to sing or give instruction in music.

Penmanship.—In nine weeks of visitation the survey committee observed only seven lessons in penmanship. In most schools on only two days per week were lessons given. In the one-teacher school time for penmanship was easily pushed off the already crowded program. Four of the seven lessons observed were in the small towns. The system used was that which the county adopted. In each county visited it was found to be one of the recognized arm movement systems. Only one teacher was observed who had any appreciable training in the subject.

Physiology and hygiene.—Sixteen lessons were observed in the subject. Eight dealt with physiology and eight with hygiene. These lessons were distributed from grades three to eight. In every instance the sole requirement of the lesson was to be able to reproduce the subject matter of the text. The same feeble responses were noted here as in history and geography. There was only one instance where the questions of the teacher were at all skillful. There was not a single lesson where the subject matter of the text was reinforced by outside readings or by experimental illustrations. There was, however, posted upon the wall of most schools visited a vivid set of health rules, issued by the State department of public instruction

and indorsed by the South Dakota State Medical Association. They served as silent supplements to the textbooks.

A member of the survey committee had an excellent opportunity to study the work of the Red Cross nurses in two counties. She was present on several occasions when talks and inspections were made by the public health nurses in the schools, and once when a public health talk was a feature of a community meeting. The enthusiasm of both children and community over the coming visit of the nurses were very noticeable. The children had sold the seals, and the coming of a nurse to the schoolhouse was both a vital and novel factor. The frequent calls for the public health nurse made by homes where there were real or suspected cases of illness were evidence of the welcome extended to her by the community.

In each of the counties referred to above, health creeds were presented to each child. Cards showing the status of the child's physical condition, as scored by the examination of the nurses, were given the children to be carried to the parents.

In general it may be said that instruction in physiology and hygiene by the teachers was bookish and remote. The campaign carried on by the Red Cross seal commission was the only avenue afforded to supplement and vitalize the information of the textbooks.

Reading.—Table 38 indicates that of the 96 recitations observed in reading, 69, or 72 per cent, were in the first three grades. It has already been mentioned in the discussion on the course of study that in these grades the process should be concerned with the mechanics of reading. In treating the observation of these reading lessons the discussion deals with the first three grades, apart from the other grades, as marking the line where the process of learning to read changes to that of reading to learn as the syllabus states it.

The 32 lessons observed in the first grade represented every stage of progress. There were in some rural schools pupils who had been in school but a few weeks, or who had missed so much time that their progress marked but a few weeks. It was not uncommon to find two or three divisions in the first grade. Some pupils were still reading from the blackboard, and others had completed their second or third primer. Of the 32 recitations observed in this grade, 20 were mere exercises in word calling. Snatches, like the following, from the field notes very clearly picture this type of lessons: "Pupils drawl." "Teacher looks over child's shoulder and tells him words he does not know." "Words, not sentences, the unit of thought." The treatment of eight of these first-grade lessons could be called good. The features that characterized them as such were: New words sounded and pronounced by children; pictures talked about; sentences or entire lessons read silently; and finally, the sen-

tence or lesson read aloud. The subject matter of four lessons was entirely concerned with phonics.

The process of word calling continued in the second and third grades as in the first. The children read a paragraph, or until the teacher called a halt. If the child did not know a word either the teacher or a pupil told him. After the paragraph or lesson was read it was usual to ask a few questions concerning the subject matter. There were only three instances where these questions were well organized. In one case the teacher read her questions from notes, which was evidence that she had made some preparation of the questions in advance.

The reproduction of the subject matter was very often choppy. The substance of single paragraphs was retold instead of the story as a whole. Frequently the teacher asked a few questions, at the beginning of the lesson, about the story read on the previous day.

In nearly every reading lesson observed in these lower grades the difficult words of the lesson were spelled in the beginning. Little was said about the place of these words in the context. Drill in phonics was observed in only two cases above the first grade.

There were only four instances of dramatization in all these 72 lessons in the first three grades, although the syllabus on reading has especially emphasized dramatization. In the four instances cited the selection of the characters, the stage setting, and the type of acting were determined by the teacher rather than worked out by the pupils. There were three occasions when conversational lessons were killed by being resolved into mere exercises in calling words.

Since reading occupies so much of the time allotment in the first grade, and since the seat work of this grade must be planned by the teacher, a careful study was made of the kind of seat work these children were assigned at the close of the lessons. In only 11 of the 32 recitations were the children assigned any work whatever. Of this group the variety of work was as follows: Writing words or sentences, 6; sentence building, 1; drawing pictures, 2; clay modeling, 1; paper folding, 1.

The words and sentences to be written were from the lesson already read. There was no time to supervise this writing, and as a result it was imperfectly and hurriedly done. Requiring pupils to write a lesson is the easiest way of providing employment for little children. In one instance, the picture to be drawn was from the book and was associated with the lesson. In another, it was foreign to the lesson and the model was imperfect. In the clay-modeling exercise the children were told to model a bird. Inspection of the work by the visitor showed that they had worked out about everything else but a bird. All this indicated that there was a general neg-

lect of seat work in the primary grades and what was assigned m of small educational value to the children.

From what has been said of the character of instruction in reading in the first three grades, it was evident that the mechanics of reading had not been mastered, and it could hardly be expected that a marked difference would be observed in the instruction in the upper grades. In 25 of the 27 lessons in these upper grades the procedure was similar to that noted in the lower grades. The children merely read the lesson, a paragraph in turn. The words that they could not pronounce were named either by the teacher or by volunteer pupils of the class. In two lessons a list of words had been assigned in advance. The questions on interpretation of the text asked by the teachers were not planned and well organized. In fact, very few questions were asked concerning the context. It was clear that the teachers realized that the reading was poor, for such admonitions as these were frequently heard: "Now read with expression"; "I'll read it, then you read it."

The two exceptions to these perfunctory exercises in word calling are given. One was a fourth-grade study lesson on "Old Pipes and the Dryad." The story was new to the children. They were told to read to themselves. When they came to a word they did not understand, they discovered the pronunciation for themselves in the list of words at the close of the lesson. The pronunciation and meaning were then discussed. In this exercise no stated number of pages was set for study. The pupils were reading at their own pace. The whole affair was an individual, rather than a class exercise, the teacher passing about the desks giving help where it was asked. Comments upon situations that rose were frequent. Some one suggested that the story was something like the "Pied Piper." This pupil was asked to retell the story about the "Pied Piper." The recitation time ended before the children had finished reading the story. The pleasing thing about the recitation was the interest of the children, the fact that they were reading the story as a whole, and that the mechanics of reading were subordinated to thought getting.

The other exception was a descriptive lesson on "Quails." There was an introductory talk about these birds, and mention of the South Dakota game laws concerning their preservation. The points of the lesson in the book were then discussed. The children were later asked to read a portion of the lesson before being asked to stand before the class and read aloud. This exercise differed from the other in that the lesson had been read in advance and that oral reading was made a feature of the exercise. "Old Pipes and the Dryad" was a longer selection and its reading was not finished in one lesson. Whether there would have been time given to oral reading can be

only a conjecture. It may be said, however, that in both these exercises the children were reading to learn.

Exclusive of the nursery rhymes in the first grade, 14 of these recitations were poems. With the single exception of "Hiawatha," these poems were short enough to be treated in a single lesson. There was not an instance where the appreciation of the children was aroused either through personal experiences or through stories or through pictures for the subject matter of the poem. The nearest approach was when a pupil read from the text a paragraph explanatory to the "Skylark." A class reading the "Lesson of the Water Mill" had never seen a mill. A picture would have done much to bring this poem into the children's consciousness. "The Village Blacksmith" was read in a singsong manner. A class confessed they did not like the "Lady of Shalott" because they did not understand it. In the poems observed, the visitor found practically no difference in their treatment from that of the prose selections.

Summarizing the instruction in reading it may be said that in more than two-thirds of the lessons observed in the first three grades the mechanics of reading were not efficiently taught. Full use was not made of the material offered for dramatic and conversational lessons. Phonics were generally neglected. Questions asked by the teachers on the context were few and not well organized. Only limited attention was paid to the excellent suggestion in the course of study relative to the need of making good silent readers. Above the third grade only two lessons out of 27 were efficiently handled. In the poems taught nothing was done in advance to arouse the appreciation of the pupils in the subject matter. These poems were read in the same perfunctory manner as were the poorest prose selections.

Spelling.—Twenty-four recitations were observed in spelling. Table 38 shows them to be scattered through grades two and eight, inclusive. Eight were oral recitations and 16 written. With one exception, the oral spelling was a feature of the primary grades. In 14 written lessons the words were written by the pupils in response to the teacher's dictation. In one lesson all the words were used in sentences; and in another only such as the teacher thought difficult were required to be put into sentences. In all but one instance the pupils exchanged papers and made their own corrections. In the other case the teacher herself made the corrections. The observer noted that a very high percentage of children spelled all the words correctly. The children were more often found studying spelling than any other subject and seemed to enjoy the spelling exercises. This is due to the fact that the learning of a list of spelling words is a much more tangible thing than the reproduction of a narrative in history or geography. Again, the spirit of rivalry aroused in spelling tends to arouse interest.

The words were taken from spelling books in 14 of the 24 lessons. In the remainder they were selected from other lessons. In these lists were included words already familiar and some for which there was no need of learning the spelling. There were two instances where spelling books were in the hands of second and third grade pupils. On numerous occasions the visitor tested the pupils on the meaning of the words taken from spelling books and found that while the words could be spelled they could not be functioned in sentences. One example was a list of words ending in "ary," such as "reactionary," "elementary," etc. Another was a list of words pertaining to railroading—most of which were foreign to the class. One boy, who had some experience in railroading, knew the meaning of all the words.

Summarizing the results of the spelling lessons, it may be said that in two-thirds of the recitations observed children were spelling many words which they were not able to use either in conversation or in writing. In the 87 schools visited no evidence was found of individual spelling lists and the elimination of words with which the children were already familiar. These two features are especially emphasized in the course of study.

Instruction in high schools.—Before discussing the status of instruction observed in the high schools of villages and small towns of South Dakota, it is quite necessary that there be a few statements concerning the regulation for teaching high-school subjects and the gradation of the high schools recognized by the State department of education.

The school law of South Dakota gives the voters of any school district power at their annual meeting to order the teaching of high-school subjects. No instances were recorded where such subjects were taught in the one-teacher schools visited. However, this condition exists. Replies to this question from 500 teachers, in one-teacher schools, scattered throughout the State, indicated that 25 teachers, or 5 per cent, are teaching high-school subjects.

Classes were observed in 17 high schools in the villages and small towns of the State. Fifteen of these schools were listed in the directory of secondary schools for 1917–18, issued by the State department. Their rating was as follows:

TABLE 39.—*Accredited schools.*

	Accredited.	Nonaccredited.		Accredited.	Nonaccredited.
Four-year high schools	7	4	One-year high schools	1	.....
Three-year high schools	2	.....			
Two-year high schools	.....	1	Total	10	5

The reason one school was not listed was probably due to the fact that it failed to make a report, for its equipment and teaching force were such as should have placed it in the four-year accredited group. In the other school one teacher was attempting to do four years of high-school work. Of course this school could not expect any accredit rating. The numbers of teachers in the four-year accredited schools were three and four; in the nonaccredited schools, two and three. This necessarily meant that the high-school teachers in these small-town schools were burdened with preparations in four or five subjects, and were required to teach subjects other than those in which they had made special preparation.

Twenty-three recitations were observed in the high schools of these small towns. In order that the teaching might be representative of normal conditions, the same precautions were taken in observing high-school classes as those already mentioned for the grades. The distribution of subject matter was as follows: English, 8; foreign language, 2; science, 3; history and civics, 6; and mathematics, 4. These recitations were fairly representative of all the four high-school grades.

In three of the English recitations very efficient work was done by the pupils in interpreting masterpieces; in another character effects were skillfully handled; two lessons were practically recited by the teacher; and two drill lessons concerning principles in rhetoric were dull, listless, and not understood by the pupils.

The foreign-language lessons were exercises in translations. In both careful attention was given to construction. One science lesson was taught with the aid of laboratory experiments. The others were merely repetition of the facts in the textbook.

In one recitation in history each pupil wrote upon the blackboard an outline of a topic assigned from the lesson. These outlines were then discussed by the entire class. The remaining recitations in history and civics were reproductions of the text. It was difficult to get responses from the pupils. The tendency was for the teacher to do most of the retelling.

Two mathematics classes furnished excellent drill exercises. In a third lesson problems that the majority of the class had failed in were solved by the few pupils fortunate enough to master them. In a fourth lesson the subject matter could not be comprehended by the pupils because preceding principles were not mastered.

Relative to high-school instruction, it may be said that more than 50 per cent of these high-school subjects were handled effectively. The most glaring fault was the failure to stimulate research on the part of the pupils in the preparation of the lessons.

Final summary.—The observations on physical conditions are based upon visits to 89 rooms in the village schools and 48 in the

open-country schools. In the sum total of items these condi scored higher in the former. In 79 per cent of the open-cou schools the lighting was unsatisfactory. There were satisfa maps in 52 per cent of the open-country schools; and globes in per cent. There were approximately a set of maps and a globe every school in the small towns. Maps and charts were not use their capacity. In both types of schools there was a general lac supplementary readers and illustrative material.

The medium length of time for 62 recitations in the open-cou schools was 10.21 minutes. Definite and carefully prepared les assignments were noted in 9 per cent of 86 lessons.

The total number of recitations observed in the elementary gr was 286. Only two were in agriculture. Seventy per cent of arithmetic lessons were drill lessons. There was evidence of general lack of mastery in the mechanics of calculation. The lessons observed in civics, geography, history, and physiology hygiene were, with four exceptions, poor attempts at a reproduc of the facts of the lesson assignments of the text. The langu teaching was concerned more with the mechanics of language th with oral and written composition. With but few exceptions, tec nical grammar was confined to the seventh and eighth grades. Ve little was attempted in the instruction of the technique of music. several lessons observed in penmanship only one teacher had spec preparation. Ninety-six lessons were observed in reading. Sixty nine were in the first three grades. In two-thirds of these recitatio the mechanics of reading was not well mastered. Phonics was gene ally neglected. Of the twenty-seven reading lessons observed abo the third grade, only two were taught effectively. The spelli lessons were especially enjoyed by the pupils, although they co not function many words in sentences. The great defect in hig school teaching was the failure to stimulate research on the part the pupils.

The following characteristics were common to all the teachi observed: Slavish adherence to the textbooks, tendency to wand from the topic under discussion, aimless reviews, and a lack of carefully planned lessons.

In observing the teaching process in the rural and village scho of South Dakota the following question was constantly kept i mind: To what extent was the course of study used as guid Throughout the discussion in this chapter some specific comparison have been made between the requirements of the course of study an the kind of teaching seen. These comparisons are herewith collect and explanations made in order that intelligent answers may b made to the above question.

The suggestions on alternation of subject matter in the seventh and eighth grades were very generally followed. The lack of mastery of fundamentals in arithmetic indicated that the outline in the syllabus was not followed. The outline for reading suggests that the mechanics of reading should be mastered in the first three grades, and that from then on the child should read for information and appreciation. Yet the classroom reading was, practically in every grade, a drill in mechanics. There was not an instance where the suggestions in the course of study on how to study a poem was followed. Attention has been called to the lack of individual spelling lists.

The textbooks were followed literally in civics, geography, history, physiology, and grammar. It is true that the course of study for these subjects (with the exception of the supplementary outline in physiology) follows the traditional arrangement of the textbooks. Yet these outlines do show how the subject matter of any textbook may be approached topically. Had the teachers followed these topic units, the textbook teaching might have been more effective.

The very excellent supplementary reading matter on the various subjects of the text could not be used when there was a lack of reference libraries. However, there was more reference material in the school libraries than was made use of. The same statement has been made concerning maps and globes.

In conclusion it may be said that the textbook was far more often followed than the course of study. When the course of study was followed it was usually found to be in the upper rather than lower grades. This was undoubtedly due to the proximity to State eighth-grade examinations.

Realizing that the highest mental efforts are secured when physical conditions are at their best, the committee has in another chapter recommended an improved physical plant. However, the supreme remedy for poor instruction is better-prepared teachers. For an analysis of these qualifications the reader is referred to the recommendations at the conclusion of Chapter XIV.

Section 2. SUPERVISION.

Requirements of the law.—To inquire into the methods of instruction in the several branches taught and to make constructive suggestions are among the duties assigned by the school law of South Dakota to the county superintendents. This single duty of supervision of instruction is, in itself, in practically every county in the State, too large a task for one individual. To properly supervise instruction it is necessary to visit the classrooms often and to have frequent conferences with the teachers. The school law of the State

specifies that county superintendents shall visit schools as frequen as possible, with the modification that it shall not be less than one year. The survey committee found, from conversations with coun superintendents, that there were instances where it was physica impossible to visit all the schools of the county in a year.

It is stated in the chapter on county administration and sup vision, that the maximum amount allowed for traveling expense $400. But not all of this allowance can be used in visiting the scho in the county. Out of it the county superintendents are allo 5 cents per mile each way for every mile traveled in attending me ings called by the State superintendent. The area of 45 per cent all the counties in the State is over 1,000 square miles. It is cle then, that even if the county superintendents had no other duty o side of supervision of instruction the allowance for traveling e penses would prohibit adequate supervision.

County superintendents not trained for supervision.—The edu tional qualifications of the county superintendents are given in Cha ter VII of this survey. Careful consideration of these qualificatio would indicate that only about one-third of these superintende were fitted academically and professionally for supervision. Th does not mean that this one-third had other qualifications necess for supervision. Additional consideration would necessarily be give to their experience, physical status, and personality.

Actual status of supervision.—Reports from county superinte ents, given in the chapter on county administration and supervisi indicate the maximum time devoted to supervision as one-half of a their time in the case of eight county superintendents only. Th others all gave less time. It is apparent from these answers o county superintendents and from the low requirements of the la that the visits to the schools by South Dakota county superintenden amount to little more than incidental inspection.

An examination of the reports from the State department an observations in various counties indicate that the reading-circle wo of the State is well organized. Chapters from the adopted reading circle books are frequently used to form the bases of the program at county institutes and associations. County normal institutes of not less than five days' duration are required by law to be held fo each county. These institutes, associations, and normals serve indi rectly as means of supervision.

Need of supervision.—It has been stated that the supreme remedy for poor instruction is a well-trained teacher. Back of this teache there must be the supervisor with a broad vision of the education field, with actual experience in class-room teaching and with a knowl edge of and sympathy with rural life conditions. The rural teacher is isolated, and, unless she touches elbows often with those who are

able to give help and inspiration, she loses the professional spirit. This was very clearly demonstrated in the South Dakota schools when normal-school graduates were hearing classes in the same perfunctory manner as those who had but half their professional training. The district associations and institutes would mean infinitely more to the teachers if they were conducted by supervisors who knew their problems intimately, and if, instead of stated speeches and papers, there might be free discussions between supervisors and teachers concerning the difficulties that confronted them.

It has been recommended that the course of study contain a very full list of reference books and illustrative material for every subject in the curriculum. The teacher in the open country or small towns has so many lessons to prepare that it is practically impossible for her to do the research work necessary for efficient preparation in all of them. Then, again, it is impossible to get hold of the reference material. To open the avenues to such research, to give hints and methods of instruction, and to see to it, through the medium of circulating libraries, that abundant reference material is available are very important duties of supervision.

The best-organized city systems supplement their teaching force by adequate supervisors. If this is important for the city, how much more important is it for the country, where the teacher does not have daily personal contact with other teachers and is not within reach of reference libraries. Only half the problem of instruction is solved by employing a trained teacher. It takes the efficient supervisor to complete the cycle. To the slacker teacher this supervisor is a righteous goad, to the indifferent a signal for awakening, to the weak a sustaining arm, and to the strong a fountain head of help and inspiration.

Recommendations.—In view of the facts just stated the survey committee recommends the following:

1. That the county superintendent, as chief executive officer, be relieved of the duty of supervision of class-room instruction.

2. That one subject supervisor be employed by the county board of education for each group of 50 teachers.

Chapter XV.

TOWN AND CITY SYSTEMS.

Section 1. GENERAL CONSIDERATIONS.

The towns and cities in South Dakota of over 1,000 popula are all organized under the general school law of the State (ex where Article XI conflicts with this general law, in which ca is the law) as independent school districts. There are 39 s towns and cities in South Dakota. For the purposes of this sur they have been rather arbitrarily divided into two groups—t of over 2,000 population being placed in one group and those w a population between 1,000 and 2,000 being placed in another gro The list is as follows, the population being indicated according the 1915 State census immediately following the name of the and according to the 1910 Federal census in the second column lowing the name of the city.

Population of towns and cities of South Dakota.

Cities of over 2,000 population.	1915 census.	1910 census.	Cities of 1,000 to 2,000 population.	1915 census.	1910 census.
Sioux Falls	20,929	14,094	Milbank	1,940	[illegible]
Aberdeen	11,846	10,753	Flandreau	1,688	[illegible]
Watertown	8,313	7,010	Webster	1,640	[illegible]
Lead	8,128	8,392	Mobridge	1,551	[illegible]
Mitchell	7,785	6,515	Elk Point	1,546	[illegible]
Huron	6,112	5,791	Dell Rapids	1,538	[illegible]
Yankton	4,771	3,787	Sisseton	1,386	[illegible]
Rapid City	4,268	3,854	Beresford	1,332	[illegible]
Madison	3,949	3,137	Parker	1,324	[illegible]
Brookings	3,416	2,971	Tyndall	1,302	[illegible]
Redfield	3,122	3,060	Scotland	1,249	[illegible]
Deadwood	3,113	3,653	Woonsocket	1,201	[illegible]
Pierre	3,010	3,656	Clark	1,200	[illegible]
Vermilion	2,376	2,187	Howard	1,169	[illegible]
Canton	2,316	2,108	Wessington Springs	1,142	[illegible]
Hot Springs	2,140	2,140	Parkston	1,132	[illegible]
			Salem	1,132	[illegible]
			Centerville	1,109	[illegible]
			Bellefourche	1,101	[illegible]
			Chamberlain	1,055	[illegible]
			Sturgis	1,029	[illegible]
			Groton	1,028	[illegible]
			De Smet	1,014	[illegible]

It will be noted that there are 16 of the larger towns and citi and 23 of the smaller.

The total population of the 39 towns and cities in 1915 was 125,494. The total population of South Dakota in 1917 was 582,765. Of the population of South Dakota, therefore, 21.5 per cent is to be found

in the 39 towns and cities listed above. Data from every town and city listed were received in time for inclusion in the findings reported, with the exception of Yankton and Wessington Springs, representing a total population of 5,913.

Legal provisions: Board of education and officers.—These towns and cities are, for educational purposes, under the control of a board of education of five members, each of whom is elected for a three-year period. In addition to the board, there is elected a treasurer, who also serves for three years. In addition to these officers there is a clerk, who is elected by the board from outside the membership of the board. The treasurer and clerk receive compensation, but the members of the board do not.

The law specifically provides that "in order to separate party politics, so far as possible, from school affairs, no descriptive words or symbol to designate the party or principle of any nominee shall appear on the certificate of nomination, or be used or printed on the ballot." There is a slight possibility of the school election being influenced by other considerations in commission-governed cities, where the law specifies that the election for choosing members of the board of education shall occur on the third Tuesday of April, when the mayor and commissioners are being elected.

Provision is made for the transaction of the business of the board in regular meetings, "which shall be held upon the last Friday of each month, but may, in the discretion of the board, be on the second Friday also, and special meetings may be held." In connection with the business of the board, the duties of the officers are those regularly falling to such officers. It is provided that the president of the board shall appoint all committees. The law requires that the clerk of the board shall make an annual report of the condition, financial as well as educational, of all of the schools at the close of each school year. A copy of this is required to be filed with the county superintendent, and such portion of it as the board considers advantageous to the public shall be printed in a public newspaper or in pamphlet form. The law requires the treasurer to prepare a written monthly report showing the financial condition of the school corporation. Within 20 days after the end of the fiscal year, the law requires that the board shall publish in a newspaper a statement of the receipts and expenditures, showing in reference to expenditures the amount paid for teachers and repairs and incidentals. This statement must also show the amount on hand at the close of the fiscal year and in what bank the money is deposited.

Taxing power of board.—The authority to levy the necessary tax is centered in the board of education, who "shall on or before the fifteenth day of August of each year levy a tax for the support of the schools of the corporation." The levy is to be certified to the

county auditor by the clerk of the board, who is "authorized a required to extend the levy on the tax roll of the county." The b must show the amounts it is sought to raise in the several fu and in taking receipts for money paid over to the treasurer of t board, the receipts must show the proportionate amounts belon to the several funds for which levy was made. The session law 1915 limited the total rate of the annual tax levy in indepen school districts to 15½ mills on the dollar of assessed valuation.

Superintendent of schools.—The law specifies that the "boar education in cities of the first and second class at such times as shall deem expedient shall elect a superintendent of schools" w not a member of their own body. His duty "shall be to have a g eral supervision of the schools of the corporation, subject to the r and regulations of the board." He "shall hold his office during pleasure of the board and shall receive such compensation as board may allow." The only provision in the law in reference the qualifications required of the superintendent of schools is t "no city superintendent or principal shall be employed who d not hold a first grade or State diploma."

General authority of board.—On the board of education, toge with the other officers above indicated, power is conferred to "orga and maintain a system of graded schools, to establish a high sc * * * and to exercise sole control over the school and school p poration." Under the law, they must maintain the schools in se sion daily for five and a half hours exclusive of intermissions. not less nor more than 10 months in each year.

The board has authority to appoint two competent persons, w with the superintendent as chairman shall constitute the examin committee of the board, with power to examine teachers for th schools and to issue certificates to such teachers legalizing their em ployment in the schools.

It is made the duty of the clerk of the board annually to ta the census of all children under 21 and over 6 years of age residi in the district.

The board is definitely charged with the enforcement of the com pulsory education law which requires every child of the age of 8 an not exceeding the age of 16 years to attend school during the entir time the public schools are in session, until he has completed th first eight grades. To guarantee the enforcement of the compulsor education law, the board is required to appoint each year a truan officer to enforce the provisions of the law. The fixing of compen sation for his services rests with the board.

While the schools in the towns and cities are required to use th books adopted for the schools of the county, authority is conferred upon them to provide books free for the use of the pupils.

Chapter 225 of the Laws of 1917 provides specifically authority for doing a number of things which had not been definitely covered in earlier legislation. All of these provisions are important, but it seems worth while particularly to draw attention to the authority conferred to supply ample quantities of texts, reference and library books, tools, materials, and all sorts of equipment needed in instruction. Chapter 223 of the Laws of 1917 specifically provides for the use of the public-school buildings and property for other than traditional educational purposes.

Section 2. STUDY OF THE ACTUAL PRACTICES IN TOWNS AND CITIES.

Board meetings.—The data show that of the 35 towns and cities reporting, 31 hold meetings of the board of education monthly, two semimonthly, and two irregularly. Thirty-four of 35 superintendents attend regularly, while one does not always attend.

In reference to those who attend the meetings of the board in addition to the members of the board and the superintendent of schools, 8 report that no one else attends; 15 that the clerk attends; 1 that the school attorney attends; and 2 that the high-school principal attends. The other 9 simply answer that anyone attends. Evidently, these 9 may be combined with the 8 answering that no one else attends, giving 17 out of the 35 towns and cities reporting in which the board meetings are held with only the board of education and the superintendent present, except as interested citizens or persons having official business may attend the meetings.

In all except 7 of the 35 towns and cities reporting, the business of the board is transacted by the entire board. In the other 7 cities, the business is prepared and reported by committees for action of the entire board. The titles of the committees reported by the seven cities are Teachers, Finance, Property, Repairs, Supplies, Purchasing, Building, and Textbooks. Not all of these committees are reported in any one place, of course, but this variety of names is found. In one city, the title Finance and Accounts is reported, and in another, Buildings and Grounds is the designation for one of the committees. It is interesting to note that in the two largest cities of the State the school business is transacted by the board as a whole instead of being reported by committees.

Almost universally, the record of the proceedings and the drawing of warrants are attended to by the clerk of the board. One report shows that the superintendent records the proceedings, one that the superintendent draws the warrants, another that the president of the board draws the warrants, and another that the treasurer of the board draws the warrants.

Thirty-three reports were received in reference to where the board's records and paid invoices are kept. In 32 cases they are kept in the

board's office in the school building. In one case they are kept elsewhere. The reports show that the boards of education have the custom of meeting and transacting their business at various places. Of the 35 reporting, but 13 report that the board's business is transacted at a school office. Others report that the board meets in a store, in the bank, in the city hall; while others report "no particular place," evidently meaning that the meetings of the board are held at such places as may be appointed from time to time.

Enforcement of compulsory education.—Data were received from 29 sources regarding the truant officer. The returns show that this officer is paid in every case out of board of education funds, except in those cases where the superintendent, or the police, or the clerk, or the school nurse, or the janitor acts, in which case it is considered that the salary fixed for the main work of the officer covers any duties he performs as truant officer. One reports that the amount paid is not definitely fixed. Four returns show that the amount paid the truant officer is determined by the amount of work he does. In other words, he is paid in accordance with the number of cases he handles and the success he achieves. Two fixed the amount to be paid by the month or year. The returns were definite in reference to the amount paid in 12 communities. The material secured is as follows:

Amount.	Number of towns or cities.
$5.00	1
7.00	1
9.00	1
25.00	1
45.00	2
70.00	1
135.00	1
200.00	1
300.00	1
1,000.00	1
1,200.00	1

Thirty-one returns answer the inquiry in reference to whether the compulsory-education law is satisfactorily enforced, giving the opinion that it is, eight that it is not, and one saying that it is only fairly satisfactory. The reasons assigned for this law not being satisfactorily enforced are: "Conditions due to the war"; "Impossibility of enforcing it under the present law"; "Failure of the board to provide a truant officer"; and a belief expressed by two that there is no need of enforcing it. Conversation with a number of superintendents brought out the fact that the obstacle in enforcing the law is the broad general provision in the law specifying "that this section shall not apply to a child otherwise instructed by a competent per-

son." They told the writer that this provision makes it practically impossible to enforce the law without great difficulty.

Encouraging professional growth.—In response to the inquiry as to the provision made by boards of education in South Dakota for encouraging the superintendents, supervisors, and other officers of the schools to keep abreast of the times, 31 replies were received. Six said no provision was made. One frankly reported that the board of education encourages professional growth by such means as the following: Allowing teachers time off, and paying a portion of the expenses involved in visiting conventions and other schools. Two reports are of outstanding significance, one showing that the board of education allows $100 per year additional to any teacher who attends summer school, the other that the board pays the tuition and transportation expense connected with attending summer school, this remuneration being available to any teacher of the system every other year.

Growth of teaching staff.—In reference to the reading and studying on the part of teachers during the year of the survey, 29 reports were received. The returns show correspondence work was being carried in 2 towns and cities; extension work in 7; State reading-circle work in 9; study of special books in 4; study of penmanship in 3; while 4 did not return usable data. In 18 towns it was reported that meetings were held in connection with the work the teachers were doing, while 6 said no meetings were held. Seventeen answered the inquiry as to when the meetings were held, 5 meeting twice per year; 3 meeting monthly; 2 holding four meetings per year; 2 meeting weekly; 1 three meetings per year; 1 meeting every six weeks; 1 meeting biweekly; and 2 occasionally. Of the 17 reporting the meetings, 8 indicated that the meetings are conducted by the superintendent; 5 that they are conducted by the county superintendent; and 4 that they are conducted by university or college instructors.

In addition to the reading and studying, and the meetings held in connection therewith reported above, 25 reported meetings held for other purposes. Six reported meetings held monthly; 4 weekly; 2 biweekly; and 13 meetings held "occasionally," "frequently," or "as need arises." Twenty-three answered in reference to the purpose of these meetings as follows, 19 saying they are for some phase of professional work, 3 that they are for social purposes, and 1 that they are for inspirational ends.

The above data, taken in connection with the reports by teachers in reference to the limited number of books purchased and the limited supply of educational magazines taken, would suggest that there is need for some method of encouraging those types of reading and studying which result in professional growth.

The school day.—The data received in regard to the length of school day may be tabulated as follows:

TABLE 40.—*Length of school day.*

	Frequency of cases.
5 hours	3
5 hours 5 minutes	2
5 hours 15 minutes	1
5 hours 25 minutes	2
5 hours 30 minutes	6
5 hours 40 minutes	3
5 hours 45 minutes	6

From the above data it will be seen that eight schools do not maintain a school day of standard length under the law, which requires a day of five hours and a half in length. Six are meeting the requirement of the law, whereas nine exceed the requirement of the law.

Promotion.—Twenty-nine towns and cities report promotions are made annually, while five report they are made semiannually. These figures do not quite harmonize with the returns on the inquiry in reference to how many times during the school year beginning pupils are received. These returns show that in 12 towns and cities they are received twice per year, although but five systems report semiannual promotions. The remaining cities report that they receive pupils but once a year, which is as one would expect in systems promoting annually.

In reference to the method of determining promotion, one reports that this matter is determined upon the basis of credits, beginning with the sixth grade; six that it is determined upon the basis of credits beginning with the seventh grade; five that it is determined upon the basis of credits beginning with the eighth grade; whereas 21 report that promotion is by grades throughout the elementary schools.

The junior high school.—Thirty-five returns were received in response to the inquiry regarding the maintenance of junior high schools. Four report they are maintained, 31 that they are not. Of the four having what is called a junior high school, three have the seventh and eighth grades in this school, while one has merely the eighth grade. All report other grades in the same building with the junior high school. The data received would indicate that not any of these towns or cities yet has a real junior high school. What exists is a departmental organization of the teaching in the seventh and eighth grades, but the other opportunities which should be offered by a junior high school, such as wider subject-matter opportunities, prevocational studies, and appropriate social, literary, and athletic advantages, are not adequately provided.

Uses of the school building.—Thirty reports were received in reference to the use made of school buildings other than for school purposes. Seven cities report that the buildings are used for community meetings, 7 that they are used for meetings connected with school work, 3 that they are used for war work, 1 that a school building accommodates a city library, and 1 that school buildings are used for voting places, while 11 report no use of school property except for actual school work. This limited use of school properties is probably due to the fact that there was no legal basis for making use of school buildings until section 1 of chapter 223 of the Laws of 1917 was enacted.

Only 10 school systems report any efforts put forth to aid community work, and of these 10 five were in connection with war work. But 14 out of 25 reporting indicate any help received by the school from the cooperation of business men and prominent citizens of the community. But 16 out of 31 reporting indicate any parent-teacher organizations. Evidently there is large room for bringing great values to the schools through increasing and multiplying the relationships existing between the schools and the other community activities in the various towns and cities.

Summer schools.—Of 37 reporting, but 12 report any provision for continuing the education of the children during the summer vacation. In these 12 towns and cities the expense for schooling is financed out of public funds in but six places, although part of the expense is borne by public funds in two other places. In the remaining towns the entire expense is met by other than public funds.

Playgrounds.—Of the 35 schools reporting, 3 state that public playgrounds are maintained by public funds, 1 that they are maintained by money derived from popular subscription, and 1 that they are maintained by funds raised by parent-teacher organizations. The other 30 report no provision for public playgrounds.

Rules and regulations.—But 14 of the 37 towns and cities report any printed or typewritten rules and regulations for the guidance of teachers and the head of the school system, or for the government of the schools. Seven of these were reported from towns and cities of less than 2,000 population. Five of these were merely one or two-page typewritten regulations, while two were issued in printed form bearing the date of 1910. In one of these towns the rules and regulations cover 9 pages and in others 18 pages. In the latter case the entire system was covered rather thoroughly. In the towns and cities with above 2,000 population two reported only typewritten rules and regulations, whereas four systems had printed rules and regulations, these varying in extent from 5 pages in two cities to 37 pages in one, and 57 in another.

It would certainly make for stability and for uniformity in the management and discipline of the schools if these towns and cities more generally committed to print the organization within the system and the standards expected of all—superintendent, principals, teachers, janitors, and pupils. Such a statement could not but exercise a wholesome influence throughout the schools and the community served.

School bulletins.—As a means of gaining as intimate an insight into the spirit and detailed management of the school system as possible, request was made for one copy of each school bulletin issued from the superintendent's office within a year. Only 8 of the 37 systems sent any bulletins in response to this request. It was disappointing to find that the bulletins in most of these systems were concerned almost wholly with routine matters. There were three notable and outstanding exceptions to this general situation, however. In the office of each of two superintendents a representative of the survey spent some time going over copies of bulletins sent out to the teaching staff, the larger percentage of which were breathing the modern point of view in education, suggesting new ways of working, reporting good results seen, and pointing the way to larger undertakings and results. These items from the index to the bulletins of one superintendent are suggestive of the rich and profitable character of his communications to his teaching staff:

Date.	Page.	
Aug. 26	1	Diagram—Managerial type of organization.
	2	Explanation—Managerial type of organization.
	3	Continuation of page 2.
	4	Public-school corps for 1916–17.
Sept. 4	1–2	Three basic business considerations.
		A five-point marking system.
18		Educational measurement.
22		Responsibility for reviews in arithmetic.
29	1	City-wide spelling test (first).
	2	City-wide spelling test (graph).
	3	City-wide spelling test (continued).
Oct. 5	1	General handwriting statement.
		Time schedule.
		Awards and certificates (drills, etc.).
10		Uniform tests.
		Premiums for perfect punctuality and attendance.
		Poor-progress blanks.
19	1	The coach room.
		The coaching attitude and method.
30	1	Standard tests for pupil diagnosis.
		Teaching economy.
		Picture committee.
		Grade-course committees.

Date.	Page.	
Nov. 6	1	Committee on playground games.
		Committee on elementary handwork.
		Progress in committee work.
		Final written examinations in grades, kindergarten to sixth, inclusive.
	2	Starch reasoning test—scores and graph.
9	1	Speed and Ayres quality of handwriting, September, 1916.
15	1	Woody test in addition of whole numbers.
17	1–3	Rating one's efficiency.
Jan. 4	1	Professional facts for the superintendent's file.
		Motivating school activities.
11	1	The Woody tests in the fundamental number operations.
		Silent reading tests.
		Silent reading test (comprehension).
	2	The marble statue—Whipple.
	3	Woody subtraction test—scores and graph.
	4	Woody multiplication test—scores and graph.
	5	Woody division test—scores and graph.
18	1	The superintendent's books.
		A school exhibition and the State fair.
		Report of committee on elementary handwork.
24	2	Paper and cardboard construction (outline of work).
	1	Directory.
Feb. 5	1	Putting first things first.
		Daily plans.
		Substitutes.
		School on stormy days.
	2	Programs on February 12 and 22.
13	1	Reorganization and building plans of the board of education.
	2	Advantages of the junior high school.
		Cost of operation (comparisons).
20	1	Motivation reports.
		Good-manners pamphlets.
		Kansas City meeting.
		Renewing our ideals.

Blanks and forms.—In five systems the general judgment of the survey was that the blanks and forms used in the transaction of business were worked out with care and were adequate in number and kind to meet the various needs. In the other systems, however, many things must have gone without written record, the business being transacted by oral requests and reports. This conclusion is a general one, however, as it was found impossible to make comparisons of the various forms and blanks used in the 39 systems with a view to standardizing the blanks required, which would have been necessary before a careful and scientific judgment could be rendered.

It was disappointing to find but 5 systems reporting any type of cumulative record card for the preservation of the records of pupils. Likewise but 5 systems reported any schedule as a basis for working out the daily

But two printed official reports were received. The other reports were made out upon standard forms for the use of clerks and treasurers.

Section 3. THE SUPERINTENDENTS IN THE TOWNS AND CITIES OF SOUTH DAKOTA.

Evidently one of the most important factors in determining the character of the educational opportunities provided the children in the towns and cities of South Dakota is the superintendent of schools. The facts in the tables appearing in the following pages, together with their interpretation, present a fairly adequate view of the leadership provided in education in the towns and cities under study.

Preparation.—The first requisite in judging the equipment for leadership possessed by the superintendents of South Dakota is a knowledge of their training. The following tables present the data showing the training of the superintendents or school heads in the 37 towns and cities from which complete data were received. In the first column of each table the facts are presented regarding the superintendents in cities of over 2,000 population, and in the column following that corresponding data regarding the superintendents in the towns with between 1,000 and 2,000 population.

TABLE 41.—*Elementary and high-school training of 37 superintendents.*

Character and place of training.	Superintendents in cities of 2,000 population or over.	Superintendents in cities having a population of from 1,000 to 2,000.	Total.
Elementary school training:			
Rural—			
In South Dakota		3	3
Out of South Dakota	6	10	16
Town—			
In South Dakota			
Out of South Dakota	2	3	5
City—			
In South Dakota		1	1
Out of South Dakota	4	3	7
High-school training:			
Town—			
Less than 2 years—			
In South Dakota			
Out of South Dakota			
Less than 3 years—			
In South Dakota			
Out of South Dakota	1		1
Less than 4 years—			
In South Dakota			
Out of South Dakota	3	2	5
Four years—			
In South Dakota		1	1
Out of South Dakota	2	6	8
City—			
Less than 2 years—			
In South Dakota			
Out of South Dakota	1		1
Less than 3 years—			
In South Dakota			
Out of South Dakota		1	1
Less than 4 years—			
In South Dakota		1	1
Out of South Dakota	3	2	5
Four years—			
In South Dakota			
Out of South Dakota	2	5	7

A glance at this table shows that of the present superintendents in South Dakota practically all received their elementary and high-school training outside of South Dakota.

TABLE 42.—*Normal school training of 37 superintendents.*

Years and place of training.	Superintendents in cities of 2,000 population or over.	Superintendents in cities having a population of from 1,000 to 2,000	Total.
Less than 1 year:			
In South Dakota		2	2
Out of South Dakota			
One year but less than 2 years:			
In South Dakota	1		1
Out of South Dakota			
Two years:			
In South Dakota			
Out of South Dakota			
More than 2 years:			
Out of South Dakota, 4 years, but no high-school basis	1		1
In South Dakota, 4 years, but no high-school basis		1	1
In South Dakota, 5 years, but no high-school basis		1	1

TABLE 43.—*College training of 37 superintendents.*

Years of training.	Superintendents in cities of 2,000 population or over.	Superintendents in cities having a population of from 1,000 to 2,000.	Total.
1 year	2	2	4
2 years	2		2
3 years			
4 years	7	8	15
4½ years		2	2
5 years	1	2	3
5½ years		1	1
6 years	1		1
Total	13	15	28

In addition to the training included above, one superintendent studied two years for the ministry, one took two years of correspondence study, another took one year of extension work in the University of South Dakota, one had a year of business college training, and another had a half year of training in woodwork and agriculture.

TABLE 44.—*Showing summer-school training of 37 superintendents.*

Amount in weeks.	Superintendents in cities of 2,000 population or over.	Superintendents in cities having a population of from 1,000 to 2,000.	Total.
6 weeks	2	5	7
12 weeks	2	2	4
18 weeks	1	2	3
24 weeks	3	2	5
30 weeks	1	1	2
36 weeks	1	.....	1
Total	10	12	22

From the tables pertaining to the normal school and college training of the 37 superintendents, it is easy to determine that the total amount of training in years is 133½ and, in addition thereto, 400 weeks of summer-school training.

The second body of facts gathered as a basis for estimating the professional equipment of superintendents pertains to their teaching experience. This is presented in the tables below:

TABLE 45.—*Distribution in the experience of 37 superintendents.*

Experience in years.	Total experience.		Rural and village schools.		In cities of 1,000 to 1,999.		In cities of 2,000 to 4,999.		In cities of 5,000 and above.	
	Superintendents in cities of 2,000 population or above.	Superintendents in cities having a population of from 1,000 to 2,000.	Superintendents in cities of 2,000 population or above.	Superintendents in cities having a population of from 1,000 to 2,000.	Superintendents in cities of 2,000 population or above.	Superintendents in cities having a population of from 1,000 to 2,000.	Superintendents in cities of 2,000 population or above.	Superintendents in cities having a population of from 1,000 to 2,000.	Superintendents in cities of 2,000 population or above.	Superintendents in cities having a population of from 1,000 to 2,000.
Less than 2 years	.....	.....	4	2	.....	6	.....	1	1	3
2 to 4 years	.....	1	2	7	2	7	3	3	.....	1
5 to 7 years	.....	4	2	7	1	2	1	3	1	.....
8 to 10 years	.....	4	1	1	.....	.....	.....	.....	2	.....
11 to 15 years	4	5	.....	1	.....	2	2	1	2	.....
16 to 19 years	2	2	.....	1	.....	1	1	.....	4	.....
20 to 25 years	5	3	.....	.....	.....	.....	.....	.....	.....	.....
More than 25 years	1	1	.....	.....	.....	.....	.....	.....	.....	.....
Total	12	20	9	19	3	18	7	8	10	4

TABLE 46.—*Distribution in the variety of the experience of 37 superintendents.*

Type of experience.	Cases of each type of experience.		
	Superintendents in cities of 2,000 population or over.	Superintendents in cities having a population of from 1,000 to 2,000.	Total.
Special	3	7	10
Rural	8	12	20
Village	6	16	22
In city of 1,000	3	18	21
In city of 2,000 to 5,000	7	8	15
In city of 5,000 and above	10	4	14
Total	37	65	102

TABLE 47.—*Place of birth by States or countries of 37 superintendents.*

Birthplace.	Superintendents in cities of 2,000 population or over.	Superintendents in cities having a population of from 1,000 to 2,000.	Total.
South Dakota	.....	1	1
Iowa	4	2	6
Michigan	1	.....	1
Pennsylvania	1	.....	1
Ohio	1	1	2
Kansas	1	.....	1
Illinois	1	2	3
Indiana	1	3	4
Wisconsin	1	.....	1
Minnesota	.....	4	4
Missouri	.....	2	2
Maine	.....	1	1
Norway	.....	2	2
England	.....	1	1
Not reporting	3	3	6
Total	15	22	37

The salary paid the educational leader in each community is evidently a vital factor in determining the character of leadership which each community can expect to attract. The table below gives these facts:

TABLE 48.—*Distribution of the salaries paid 37 superintendents.*

Amount.	Superintendents in cities of 2,000 population or over.	Superintendents in cities having a population of from 1,000 to 2,000.	Total.
Less than $1,500	.....	8	8
$1,500 to $2,000	2	11	13
$2,000 to $2,500	5	1	6
$2,500 to $3,000	3	.....	3
$3,000 to $3,500	1	.....	1
$3,500 to $4,000	1	.....	1
Not reporting	3	2	5
Total	15	22	37

It was not found possible to figure the living expenses of superintendents from the data presented. This matter is more difficult to reduce to a comparable basis than in the case of teachers, the reason that most of the superintendents are married men with families, their responsibilities varying according to the size of their family.

Likewise it is hardly necessary to present the data of the place of residence of superintendents. As a matter of fact, 25 of the 37 superintendents have a permanent residence in the town where they are working, while six do not. Six made no report on the matter.

TABLE 49.—*Age distribution of 37 superintendents.*

Years of age.	Superintendents in cities of 2,000 population or over.	Superintendents in cities having a population of from 1,000 to 2,000.	Total
27		1	
28		2	
29		1	
30		2	
31		1	
33		1	
34	1		
35	1		
36		1	
37	1	2	
38	1	1	
39			
40	2	1	
41		2	
42	1	1	
43	1	1	
44	1		
47	2		
49		1	
50	1		
53		2	
Not reporting	3	2	
Total	15	22	

The median age of the superintendents in cities of over 2,000 population is 42, while that in the towns below 2,000 is 37½ years.

TABLE 50.—*Distribution in the number of married and single superintendents.*

Married or single.	Superintendents in cities of 2,000 population or over.	Superintendents in cities having a population of from 1,000 to 2,000.	Total.
Single		3	
Married	12	17	
Not reporting	3	2	
Total	15	22	

TABLE 51.—*Answers to the question as to whether the superintendents expect to continue educational work.*

Intentions.	Superintendents in cities of 2,000 population or over.	Superintendents in cities having a population of from 1,000 to 2,000.	Total.
Will continue	11	17	28
Will not continue	1	3	4
Not reporting	3	2	5
Total	15	22	37

TABLE 52.—*Reasons assigned by 37 superintendents for inclining to continue or discontinue educational work.*

Reasons.	Superintendents in cities of 2,000 population or over.	Superintendents in cities having a population of from 1,000 to 2,000.	Total.
Like the work	10	10	20
Influenced by salary	.....	2	2
Preparation	.....	2	2
Better opportunities in other lines	.....	2	2
Inaptitude for the work	1	6	7
Not reporting	4	.....	4
Total	15	22	37

TABLE 53.—*Organizations in which the 37 superintendents hold membership.*

Organization.	Superintendents in cities of 2,000 population or over.	Superintendents in cities having a population of from 1,000 to 2,000.	Total.
National Education Association	11	4	15
South Dakota Teachers' Association	11	20	31
Reading Circle	1	.....	1
Miscellaneous	4	.....	4
Rotary Club	1	.....	1
Commercial Club	2	2	4
Parent-Teacher Association	.....	1	1
Red Cross	.....	4	4
Young Men's Christian Association	.....	1	1
Total	30	32	26

There is certainly cause for serious regret that aside from educational relationships, the number of superintendents reporting the establishment of other relationships is negligibly small. But one reports membership in a rotary club and but four in a commercial club. The superintendent in every community needs the stimulus which comes from contact with the business men in his community. He likewise needs the opportunities which this contact affords for enabling these business men to know his point of view and to know the objectives of the school he is heading, and likewise the ways and means which are being employed for the realization of the school's objectives. Even though his contribution to the civic organization

may be small, the values coming to the school through his relationship are so many and so vital that no educational leader should allow himself to omit the establishment of these ties.

The superintendent's disposition to grow and to become a capable professional leader may be measured somewhat by the investment he makes in a professional library and by the amount of reading and studying he does. The following list shows the books reported as being used. The figure following the name of each book shows the number reporting it. In addition to these books, 30 other titles were reported, each being mentioned but once.

Classroom Management—Bagley
Methods of Teaching in High Schools—Parker
Motivation of School Work—Wilson and Wilson
How to Teach—Strayer and Norsworthy
Psychology of High School Subjects—Judd
Principles of Education—Jones
Supervised Study—Hall-Quest
Educational Administration—Strayer and Thorndike
Educational Measurement—Starch
The Modern High School—Johnston
School Administration—Cubberley
Teaching the Common Branches—Charters
Methods of Teaching—Charters
Cyclopedia of Education—Monroe
School and Society—Dewey
Schools of To-Morrow—Dewey
School Administration and Supervision—Chancellor
Discipline of the School—Morehouse
Educative Process—Bagley
Educational Psychology—Thorndike

The magazines reported on the reading lists of the superintendents seem to permit the classification shown in the table below. Thirteen different educational journals were reported, 10 current literary and political magazines were mentioned, 3 magazines pertaining to special subjects and dealing with school devices were listed, while 3 magazines falling in the type of fiction and miscellaneous were included in the returns.

TABLE 54.—*Character of the magazines read, together with the frequency of the use of each type among the 37 superintendents.*

Character of magazines.	Superintendents in cities of 2,000 population and over.	Superintendents in cities having a population of from 1,000 to 2,000.	Total.
Educational journals	29	33	[illegible]
Special subjects and school devices	3	.....	[illegible]
Current literature and political	11	19	[illegible]
Fiction and miscellaneous	1	24	[illegible]
Total	44	76	[illegible]

Section 4. THE TEACHERS IN THE TOWNS AND CITIES OF SOUTH DAKOTA.

Preparation.—The first requisite in judging of the professional ability of any group of teachers is a knowledge of the training they have had for their work. The following data regarding the 593 teachers from whom the returns from the 37 towns and cities above 1,000 population were sufficiently accurate to be usable were tabulated throughout in such way as to show the facts regarding those teachers reporting from cities of 2,000 population or over in one column, and the corresponding facts from those teachers reporting from cities having a population of from 1,000 to 2,000 in another column:

TABLE 55.—*Elementary and high-school education of 593 elementary school-teachers.*

Time.	Teachers in cities of 2,000 population or over.	Teachers in cities having a population of from 1,000 to 2,000.	Total.
Elementary school training:			
Rural—			
In South Dakota	46	30	76
Out of South Dakota	43	9	52
Town—			
In South Dakota	76	54	130
Out of South Dakota	105	39	144
City—			
In South Dakota	93	8	101
Out of South Dakota	74	33	107
High-school training:			
Town—			
Less than 2 years—			
In South Dakota	8	3	11
Out of South Dakota	8	1	9
Less than 3 years—			
In South Dakota	13	5	18
Out of South Dakota	9	3	12
Less than 4 years—			
In South Dakota	10	12	22
Out of South Dakota	14	2	16
Four years—			
In South Dakota	39	54	93
Out of South Dakota	92	27	119
City—			
Less than 2 years—			
In South Dakota	1	2	3
Out of South Dakota	1	2	3
Less than 3 years—			
In South Dakota	8	2	10
Out of South Dakota	2	1	3
Less than 4 years—			
In South Dakota	11	1	12
Out of South Dakota	9	6	15
Four years—			
In South Dakota	88	12	100
Out of South Dakota	63	15	78

A glance at the table shows that the number who received their training outside the State is almost equal to the number who had corresponding training within the State. Almost half of the teachers studied did not spend their early childhood and take their training in South Dakota.

TABLE 56.—*Normal school training of 593 elementary school-teachers.*

Time.	Teachers in cities of 2,000 population or over.	Teachers in cities having a population of from 1,000 to 2,000.	Total.
Less than 1 year:			
In South Dakota	21	12	[illegible]
Out of South Dakota	21	12	[illegible]
One year but less than two years:			
In South Dakota	74	36	[illegible]
Out of South Dakota	28	8	[illegible]
Two years:			
In South Dakota	42	25	[illegible]
Out of South Dakota	74	24	[illegible]
More than 2 years:			
In South Dakota	55	18	[illegible]
Out of South Dakota	36	4	[illegible]

TABLE 57.—*College training of 593 elementary school-teachers.*

Time.	Teachers in cities of 2,000 population or over.	Teachers in cities having a population of from 1,000 to 2,000.	Total.
Less than one year:			
In South Dakota	15	7	[illegible]
Out of South Dakota	94	23	[illegible]
One year, but less than two years:			
In South Dakota	25	4	[illegible]
Out of South Dakota	28	6	[illegible]
Two years, but less than three years:			
In South Dakota	14	9	[illegible]
Out of South Dakota	21	3	[illegible]
Three years, but less than four years:			
In South Dakota	4	1	[illegible]
Out of South Dakota	6	3	[illegible]
Four years:			
In South Dakota	4	2	[illegible]
Out of South Dakota	7	1	[illegible]
More than four years:			
In South Dakota	3	.....	[illegible]
Out of South Dakota	5	1	[illegible]

The second body of facts necessary to forming an estimate of the professional equipment of any body of teachers is a knowledge of their teaching experience.

TABLE 58.—*Variety of experience of 593 elementary school-teachers.*

Type of experience.	Cases of each type of experience.		
	Teachers in cities of 2,000 population or over.	Teachers in cities having a population of from 1,000 to 2,000.	Total.
Special	27	4	[illegible]
Rural	211	88	[illegible]
Village	187	90	[illegible]
City of 1,000	104	167	[illegible]
City of 2,000 to 5,000	232	20	[illegible]
City of 5,000 or above	323	11	[illegible]
Total	1,084	380	1,464

TABLE 59.—*Positions now held by 593 elementary school-teachers.*

Positions.	Teachers in cities of 2,000 population or over.	Teachers in cities having a population of from 1,000 to 2,000	Total.
Principal	36	2	38
Teacher in kindergarten	12	1	13
Teacher in first grade	48	22	70
Teacher in first and second grade	11	2	13
Teacher in second grade	32	18	50
Teacher in second and third grade	6	1	7
Teacher in third grade	34	19	53
Teacher in third and fourth grade	20	3	23
Teacher in fourth grade	32	18	50
Teacher in fourth and fifth grade	5	1	6
Teacher in fifth grade	29	14	43
Teacher in fifth and sixth grade	17	4	21
Teacher in sixth grade	27	14	41
Teacher in sixth and seventh grade	1	2	3
Teacher in seventh grade	15	12	47
Teacher in seventh and eighth grade	2	3	5
Teacher in eighth grade	12	10	22
Teacher in departmental work	56	9	65
Teacher of manual training	2	2	4
Teacher of domestic science	3	.....	3
Supervisor of drawing	4	.....	4
Supervisor of drawing and music	1	2	3
Supervisor of music	11	6	17
Supervisor of writing	4	.....	4
Supervisor of writing and music	1	1	2
Supervisor of physical training	5	.....	5
School nurse	1	.....	1
Total	427	166	593

It is interesting to note the small number of supervisors of drawing, there being only four in the 37 cities. The amount of attention given to music, as indicated by the number of supervisors employed, is much greater. Writing uses the time of but four supervisors, and domestic science employs but three teachers in the elementary schools, while there is but one teacher reporting who scheduled herself as a school nurse.

TABLE 60.—*Salaries of 593 elementary school-teachers.*

Amount.	Teachers in cities of 2,000 population or over.	Teachers in cities having a population of from 1,000 to 2,000.	Total.
Less than $450	1	2	3
$450-$629	28	60	88
$630-$719	140	81	221
$720-$809	128	13	141
$810-$899	65	3	68
$900-$1,000	30	1	31
Above $1,000	33	3	36
Not reporting	2	3	5
Total	427	166	593

It is seen that the income of the larger number of the teachers reporting falls between $630 and $809. Reference to the table showing the positions now held by the teachers studied reveals the fact that the 36 who are receiving above $1,000 are in all probability principals of schools.

TABLE 61.—*Living expenses of 593 elementary school-teachers for the school year.*

Amount.	Teachers in cities of 2,000 population or over.	Teachers in cities having a population of from 1,000 to 2,000.	Total.
At home	26	14	40
Less than $180	6	5	11
$180–$224	18	32	50
$225–$299	110	83	193
$300 or above	212	11	223
Not reporting	25	21	46
Total	427	166	593

A glance at this table shows that the large majority of the teachers report an expense of above $225 per year. Indeed, the number reporting an expense from $225 to $300 is precisely the same as the number reporting that it is above $300. It will be observed that 46 made no report. It was their judgment that this was too private a matter to be reported. Thus certain data were withheld which must be in hand if the arguments necessary to secure increased salaries are to be brought to bear effectively on those having in charge the regulation of salaries.

TABLE 62.—*Distribution of 593 elementary school-teachers living at home or elsewhere.*

Place of residence.	Teachers in cities of 2,000 population or over.	Teachers in cities having a population of from 1,000 to 2,000.	Total.
In home town	177	57	234
Not in home town	248	108	356
Not reporting	2	1	3
Total teachers	427	166	593

Almost three-fifths are nonresident teachers in the community where they are at work. This is a factor, of course, making it necessary that the wages of teachers should be in keeping with the added expense by reason of teaching where they can not live at home.

TABLE 63.—*Distribution in age of 593 elementary school-teachers.*

Years of age.	Teachers in cities of 2,000 population or over.	Teachers in cities having a population of from 1,000 to 2,000.	Total.
0 or less than 20	6	4	7
1	5	10	15
2	15	15	30
3	31	15	46
4	35	11	46
5	43	24	67
6	42	13	55
7	38	11	49
8	29	11	40
9	21	7	28
0	21	7	28
1	17	7	24
2	14	4	18
3	7	2	9
4	5	2	7
5	12	5	17
6	9	1	10
7	2	1	3
8	16	.....	16
9	10	2	12
0	7	.....	7
1	2	.....	2
2	3	1	4
3	5	.....	5
4	4	1	5
5 or more	9	9	18
Not reporting	22	3	25
Total teachers	427	166	593

A study of this table shows that the median age of teachers in cities of 1,000 to 2,000 is 26 years, while that in cities of above 2,000 is 28 years. Following the age of 32, the number drops very rapidly.

TABLE 64.—*Distribution of single and married teachers among 593 elementary school-teachers.*

Married relation.	Teachers in cities of 2,000 population or over.	Teachers in cities having a population of from 1,000 to 2,000.	Total.
Single	394	152	546
Married	25	8	33
Widow	6	6	12
Not reporting	2	.....	2
Total teachers	427	166	593

TABLE 65.—*Distribution of answers to the question as to whether the 593 elementary school teachers expect to continue teaching.*

Intentions.	Teachers in cities of 2,000 population or over.	Teachers in cities having a population of from 1,000 to 2,000.	Total.
Will continue	252	96	348
Will not continue	110	51	161
Undecided	45	10	55
Not reporting	20	9	29
Total teachers	427	166	593

The number who will not continue, or who are in doubt, sho the largeness of the problem of developing a fundamental conc for the business of teaching in the body of teachers under study.

TABLE 66.—*Distribution of the reasons assigned for continuing or discontin teaching by 593 elementary school-teachers.*

Reasons.	Teachers in cities of 2,000 population or over.	Teachers in cities having a population of from 1,000 to 2,000.	Tot
Like the work	129	41	[illegible]
Influenced by salary	46	23	[illegible]
Preparation	48	16	[illegible]
Support	15	4	[illegible]
Prefer it to other work	29	9	[illegible]
Too hard work	5	4	[illegible]
Health	3	1	[illegible]
On account of the war	2		[illegible]
Marriage	7	2	[illegible]
Patriotic duty to remain	1		
Go to school or change occupation	106	13	[illegible]
Not reporting	36	53	[illegible]

Those who are discontinuing assign in the main two significa reasons—continuing education and changing the occupation.

TABLE 67.—*Organization in which the 593 elementary school-teachers ha memberships.*

Organization.	Teachers in cities of 2,000 population or over.	Teachers in cities having a population of from 1,000 to 2,000.	Total.
South Dakota Education Association	321	100	[illegible]
District Education Association	16	3	[illegible]
National Education Association	4	2	[illegible]
National Music Association	5	1	[illegible]
State Music Association	3	2	[illegible]
Parent-Teacher Association or Mother's Club	82	7	[illegible]
Reading Circle	16	26	[illegible]
Local Study Club	27	8	[illegible]
Red Cross	253	64	[illegible]
Civic Organization	17	5	[illegible]
Young Women's Christian Association	16	1	[illegible]
Women's Clubs	4	2	[illegible]
Miscellaneous	6		[illegible]

Not one of these organizations succeeded in enrolling every teacher. The South Dakota Education Association came nearest it, with 421, and the Red Cross came next, with 317.

The teacher's disposition to grow and to take her work seriously may be measured somewhat by the investment he makes in professional helps and by the amount of reading and studying he does.

The total number of books reported by all concerned was 108. Of the entire list of books, 18 were mentioned by but two teachers.

'hile 39 were mentioned by but one. The book mentioned by most ›achers was Strayer and Norsworthy's "How to Teach." It was sted by 61 teachers. The six most frequently mentioned books, with ıe frequencies of mention, are as follows:[1]

'ow to Teach, Strayer and Norsworthy	61
'otivation of School Work, Wilson and Wilson	59
'eaching the Common Branches, Charters	42
chool Measurement, Bagley	36
'ow to Study, McMurry	23
ocializing the Child, Dynes	22

'ABLE 68.—*Kinds of books read and distribution of this reading among 593 elementary school-teachers.*

Kind of book.	Teachers in cities of 2,000 population or over.	Teachers in cities having a population of from 1,000 to 2,000.	Total.
'ames	33	17	50
'tories and story telling	80	34	114
'ooks on school subjects or textbooks	367	90	457
'lan or device books	99	59	158
'eference books	104	25	129
'iscellaneous	118	21	139
Total	801	246	1,047

It is seriously to be regretted that only 50 teachers out of 593 mention any book dealing with games; and only 114, any dealing with stories and story telling. Even the number of teachers mentioning books on school subjects or textbooks is only 457—136 less than the total number reporting. It will be observed that the total number of teachers reporting with reference to all the kinds of books listed is but 1,104—less than two books per teacher. Undoubtedly some provision should be made whereby it is possible to insure that every teacher in the public schools shall every year invest a few dollars in modern books which should be a help to her in her daily duties, and likewise to insure that these books are understandingly read.

The six magazines most frequently mentioned, together with the frequencies of mention, are as follows:

Normal Instructor and Primary Plans	300
Literary Digest	108
Current Events Magazine	108
National Geographic Magazine	102
Primary Education	77
American Magazine	56

[1] These are recent State Reading Circle books.

TABLE 69.—*Character of magazines read, together with the frequency of their use among 594 elementary school teachers.*

Type of magazine.	Teachers in cities of 2,000 population or over.	Teachers in cities having a population of from 1,000 to 2,000.	Total.
Educational journals	92	38	130
School devices and special subjects	352	152	504
Current literature and political	79	124	203
Fiction and miscellaneous	286	65	351
Total	809	379	1,188

Section 5.—ATTRACTING POWER OF TOWN AND CITY SCHOOLS.

One measure of the efficiency of a school system is the extent to which it enrolls the youth of school age in the community. The following tables show the enrollment of the school population in the towns and cities of South Dakota:

TABLE 70.—*Cities of over 2,000 population.*

City.	Total school census.	Total elementary and high-school enrollment.	Percentage of enrollment to census.
1	4,996	3,813	76.3
2	2,986	2,162	72.4
3	2,480	1,529	61.7
4	2,103	1,579	75.1
6	1,443	1,300	90.1
7	1,112	1,057	92.3
8	1,065	844	79.3
9	1,034	790	76.1
12	745	673	90.3
14	670	506	75.5

TABLE 71.—*Towns of 1,000 to 2,000 population.*

Town.	Total school census.	Total elementary and high-school enrollment.	Percentage of enrollment to school census.
1	734	530	72.7
4	550	455	80.2
6	482	393	81.1
7	429	435	100.1
13	452	391	86.4
15	329	179	54.4
20	348	299	85.9
21	310	280	90.0

It will be observed that the cities of above 2,000 population vary in their enrollment of the census population from above 90 per cent in cities 6, 7, and 12 to as low as 61.7 per cent in city No. 3, while the range in the towns is from above 100 per cent to as low as 54.4

per cent. To measure with careful justice the extent to which each town and city is meeting its responsibility for the education of its children, other data than those at hand are needed. Manifestly, however, many of the towns and cities enrolling such a low percentage of the children are not meeting their responsibility adequately. One factor which operates heavily in some communities in reducing the public-school enrollment is the parochial-school enrollment. To the extent that this factor enters in, the public schools are blameless. Town 7, enrolling over 100 per cent of its school census, evidently enrolls many children from outside the town or is growing rapidly.

The following tables show the distribution of pupils by ages and grades in the towns and cities of South Dakota. The percentage of retardation runs very high in all grades above the first in the towns of less than 2,000 population, and in all grades above the second in the cities of over 2,000 population.

TABLE 72.—*Age-grade distribution of pupils in cities with less than 2,000 population.*

	Under 6.	Over 6, under 7.	Over 7, under 8.	Over 8, under 9.	Over 9, under 10.	Over 10, under 11.	Over 11, under 12.	Over 12, under 13.	Over 13, under 14.	Over 14, under 15.	Over 15, under 16.	Over 16, under 17.	Over 17, under 18.	Over 18, under 19.	Over 19, under 20.	Total.	Normal age.		Accelerated.		Retarded.	
																	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Grade I	129	553	180	54	17	3	1									937	553	59	129	13	255	27
Grade II	9	126	296	147	54	25	5	2								664	296	45	135	20	233	35
Grade III	1	29	110	369	176	56	22	14		1						778	369	47	130	18	269	35
Grade IV			12	145	320	176	78	27	14	1	1					774	320	41	157	20	297	39
Grade IV				5	123	328	199	113	54	20	8	3		1		854	328	38	128	15	398	47
Grade VI					6	80	249	165	72	33	13	1				619	249	40	86	14	284	46
Grade VII					3	14	109	208	171	85	27	8	1			626	208	33	126	20	292	47
Grade VIII						1	13	78	257	208	102	34	12	5	1	711	257	36	92	13	362	51
Total	139	708	598	720	699	683	676	607	568	348	151	46	13	6	1	5,963	2,580	43	993	17	2,390	40
Normal age:																						
Number		553	296	369	320	328	249	208	257							2,580						
Percentage		78	50	51	46	48	37	34	45							43						
Accelerated:																						
Number	139	155	122	150	132	95	122	78								993						
Percentage	100	22	20	21	19	14	18	12								17						
Retarded:																						
Number			180	201	247	260	305	321	311	348	151	46	13	6	1	2,390						
Percentage			30	28	35	38	45	52	55	100	100	100	100	100	100	40						

TABLE 73.—*Age-grade distribution of pupils in cities with more than 2,000 population.*

	Under 6.	Over 6, under 7.	Over 7, under 8.	Over 8, under 9.	Over 9, under 10.	Over 10, under 11.	Over 11, under 12.	Over 12, under 13.	Over 13, under 14.	Over 14, under 15.	Over 15, under 16.	Over 16, under 17.	Over 17, under 18.	Over 18, under 19.	Total.	Normal age.		Accelerated.		Retarded.	
																Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Kindergarten	44														44	44	100				
Grade I	379	894	275	61	18	2			1					1	1,631	894	55	379	23	358	22
Grade II	30	223	694	249	108	23	13	4	3						1,417	694	48	323	24	400	28
Grade III		2	283	700	320	118	31	17	7		1				1,459	700	48	265	18	494	34
Grade IV			8	238	583	340	151	71	31	11	3				1,436	583	41	246	17	607	42
Grade V				10	277	600	338	151	79	29	13	1			1,498	600	40	287	19	611	41
Grade VI				8	70	228	476	365	179	68	24	7	1	1	1,425	476	34	304	21	645	45
Grade VII				1	9	55	190	351	283	148	63	21	3	1	1,125	351	31	255	23	519	46
Grade VIII						16	55	140	241	190	109	47	11	4	813	241	30	211	26	361	44
Total	453	1,189	1,240	1,267	1,385	1,380	1,254	1,099	824	446	213	76	15	7	10,848	4,583	42	2,270	21	3,995	37
Normal age:																					
Number	44	894	694	700	583	600	476	351	241						4,583						
Percentage	10	75	56	55	42	43	38	32	29						42						
Accelerated:																					
Number	409	295	271	257	356	297	245	140							2,270						
Percentage	90	25	22	20	26	22	19	13							21						
Retarded:																					
Number			275	310	446	483	533	608	583	446	213	76	15	7	3,995						
Percentage			22	25	32	35	42	55	71	100	100	100	100	100	37						

Section 6. THE COURSE OF STUDY IN TOWNS AND CITIES OF SOUTH DAKOTA.

Legal requirements and the course of study.—The subjects taught and the special activities or special days and events observed or commemorated in the towns and cities are regulated by statute. Chapter 214 of the session laws of 1917 (see sec. 138 of the Laws of South Dakota) specifies that instruction shall be given in the common schools of the State in the following branches in the several grades in which each may be required:

> Reading, orthography, arithmetic, geography, primary language and English grammar, history of the United States, history of South Dakota, physiology and hygiene, with special instruction as to the nature of alcoholic drinks and narcotics in their effect upon the human system, civil government, and drawing, and such other branches, including high-school subjects, as the electors of the district at the annual election may have ordered.

This general provision is added to by various enactments whereby the elements of vocal music, including, when practical, singing of simple music by rote, shall be taught.

> Moral instruction intended to impress upon the mind of the pupils the importance of truthfulness, temperance, purity, public spirit, and respect for honest labor, obedience to parents, and due deference to old age shall be given by every teacher in public service in the State.
>
> There shall be taught in the public schools of this State, in addition to other branches of study as now prescribed, a system of humane treatment of animals.

It is also provided that the proper officers are authorized and empowered in their discretion to appropriate funds for the purpose of defraying the necessary expense of a proper observance of Memorial Day each year.

The law also requires that on September 28, or on the school day in each year thereafter nearest that date, Frances Willard Day shall be observed in the different public schools of the State, one-quarter of the school day being set apart for instruction and appropriate exercises in patriotism, civic improvement, the history and benefits of the prohibitory amendment to the constitution, the prohibitory laws of the State of South Dakota.

An opinion of the attorney general, report of 1916, page 305, holds that the board of education has authority to provide for instruction in manual training and domestic science; also to prescribe a course of study. Chapter 225 of the Laws of 1917 provides that the board of education in each city constituting a municipal corporation of the first or second class, in addition to the inherent and other powers now vested in such board, shall have power to establish and maintain a uniform system of instruction in the grades to and including the eighth, in substantial conformity to the course of study adopted for the public schools of the State, to establish and maintain kinder-

garten departments, courses in physical training, courses of study and practice in vocational training.

Observations on the course of study.—The courses of study in use in the towns and cities of South Dakota were investigated in light of the legal provisions and requirements above set forth. In the 22 towns below 2,000 population, but three reported any course of study directions in use other than those provided in the State course of study. One of these merely issued three pages of typewritten directions in language and grammar. Another city reported a total of six typewritten pages supplementing the State course of study, one page being devoted to reading and literature, one to language and grammar, one to arithmetic, one to geography, and two to history. A third town reported a course of study in addition to the State course, consisting of 60 typewritten pages.

In the 15 cities above 2,000 population, seven reported course of study directions in addition to the State course of study. With one exception, however, this material was all issued in typewritten form. In cities 1, 4, 7, 10, 13, the typewritten material was organized by grades. In cities 2 and 9, the organization was by subjects.

The following comments by cities are descriptive of the course of study situation in these places:

City No. 1 issued extensive mimeographed outlines providing reference helps for pupils and teachers and indicating text omissions and text enrichments. Objective standards were suggested only in the subject of writing. There was evidence in this course of study that the teachers had participated rather liberally in the development of the details.

In city No. 2 complete mimeographed outlines in all subjects were provided. It was found, however, that a complete set of outlines was not furnished to each teacher, there being but one complete set for a building. Each teacher was furnished only with the outlines for the subjects taught by her. These outlines provided ample reference in the various subjects for pupils and teachers. In the examination of these outlines at the superintendent's office the following notes were made: In reading, each child is encouraged to read extensively, and an ample amount of material is supplied that he may be able to read very largely what he likes. In arithmetic the addition combinations to 10 were to be taught in the first grade. Omissions of obsolete material in arithmetic were not very liberally specified, although the language of the directions gives teachers freedom to make omissions according to their judgment. The geography course of study placed large emphasis on using such means as picture illustrations, construction, and so on, as a means of rendering the work concrete. The language course of study gave detailed directions in reference to a wide use of stories,

but specified the use of the book rather extensively. There was little formal grammar before the seventh grade, but after that large quantities of material now considered functionless were required to be taught. The physiology and hygiene outline was excellent, emphasis being directed to producing action and forming habits rather than to the mere teaching of facts to be remembered. The industrial and fine arts outline was quite detailed for the first seven grades. The art outline provided for picture study. The aim of the industrial arts outline was to enable the children to know how the world's work is done.

There were committees of three or more to give attention to the course of study in each of the following subjects: Reading, language, geography, arithmetic, physiology, history and civics, nature study and school gardens, music, drawing. The bulletin announcing these committees suggests they should meet about once in two weeks. The plan of working was the gathering of data in reference to actual practice and the gathering of sources of inspiration and guidance. Special emphasis was placed upon the study of courses of study and practices in other systems. Such books as the committees might need access to were to be provided by the board of education.

With provision made for working cooperatively, it was surprising to find so little evidence of motives for work, methods of teaching, results expected, illustrations of results secured. While not operative as yet, the superintendent assured me that standard scales for the measurement of results secured were coming more and more into use and that he was hoping to be able to indicate the results expected in spelling, writing, arithmetic, and reading in terms of objective standards.

In city No. 4 courses were available in reading and literature amounting to 10 pages, in writing amounting to one page, in history amounting to one page, and in nature study amounting to two pages. Within these limits it is evident that there was merely space to indicate the text to be used and the scope to be covered.

In city No. 7, while the typewritten course was brief, it was good in the reference list if supplied for the use of teachers and pupils.

The course of study in the other three cities merely specified the books to be used and the limits to be covered. In their reports regarding their practice two superintendents indicated that the course of study is supplemented monthly by outlines. In so far as access was had to any of these outlines they merely indicated any modifications from the regular course of study in the pages or chapters to be covered.

It is evident from the foregoing description of the courses of study in use that the work in the towns and cities of South Dakota is for

all practical purposes directed by the State course of study, which was prepared with the thought of giving such general directions as might be followed by all schools of all types in carrying out the provisions of the law regarding what should be taught in the public schools of South Dakota. Owing to the small size of the towns under 2,000 population and of many of those above 2,000 population, it may be that the expense of printing a course of study based upon the State course of study but adapted to the particular needs of the community served is too great. If that be true, it would seem that local initiative in supplementing the course of study might be greatly encouraged if the State course were issued especially for the use of towns and cities in loose-leaf form, so that detailed additions to the work suggested might easily be made. Much help could be brought teachers if a page could be inserted wherever necessary supplying urces of help which should be made available to teachers and pils, lesson outlines for the guidance of the teachers, illustrations results expected for the guidance of the teachers, method suggesns and games and devices for the guidance of the teachers, ways motivating work for the teacher's assistance, problem procedure teaching, socialized possibilities for the assistance and guidance of teachers. This same form of issue would make it possible for a erintendent, as standard tests are applied to the results secured, ssue tentative objective standards to be inserted in the course of ly for the guidance of teachers in the various grades and subjects. n view of the above facts showing that the State course of study essentially the guide in the work of instruction in the towns and s of South Dakota, all of the criticisms and suggestions for rovement of the State course of study indicated elsewhere apply . Further, in towns and cities more intimate adaptations to the liar needs of communities should be expected. These communipay salaries enabling them to secure leadership capable of diagng community needs and of establishing ways and means of ing them. Also, where larger numbers of pupils are congre-l, as in towns and cities, differentiations to suit the needs of al abilities and to meet the vocational needs are economically ble to an extent that does not obtain in rural communities served ne-room schools. Actually, therefore, the suggestions for imng the State course of study could not be considered detailed earching enough to supply all the criticisms and suggestions should be made for the improvement of the course of study in and cities.

Section 7. SOCIALIZING THE SCHOOLS IN THE TOWNS AND CITIES OF SOUTH DAKOTA.

Socialization of schools defined.—The large objective in progressive modern education evidently is the socialization of the schools. While it is becoming rather common for educators and teachers to state this as the object of their endeavors, there is not an overwhelming uniformity as to their meaning. It may be well, therefore, to raise the question as to what a socialized school or school system is. A person of ordinary intelligence knows when a railway is electrified, he knows the essentials of a modern house, he knows something about when a suit of clothes is in style; but the question as to what we mean by a socialized school or as to when a school is socialized needs a detailed and concrete answer, that the public which supports the public-school system may definitely understand the answer when they are told that we are endeavoring to improve the public schools by socializing them more adequately.

For the purpose of this discussion a socialized school is an institution so organized that its work and activities and methods of procedure are such that the result is immediately and directly a functional product. In other words, the pupil of a school so equipped should be able to enter upon the customary social and civic relationships. He should be able to share in the ordinary occupations of the working world, and satisfactorily discharge the duties which fall to him.

The progress which has been made in the towns and cities of South Dakota in socializing the schools can only be discussed briefly because of the limits of this survey. The discussion is presented under the proper heads in setting forth the essentials of a socialized school. Briefly stated, these essentials are as follows: Right objectives, appropriate subject matter in each of the school subjects, proper standards of discipline and control and of attainment in work, appropriate methods of teaching and management, satisfactory results.

The objectives of the socialized school.—The first essential of a socialized school is a body of objectives for its guidance which, if realized in its children, will fit them for successful social service. Everything that is done in planning all the details of a school must find its justification in the effort of the school to realize the objectives set up. The socialized school accepts as its general objective the training of the oncoming citizens for social efficiency. What this involves may perhaps be most adequately presented in a brief space in the following table:

TABLE 74.—*Social efficiency: The objective of modern education.*

Phases of efficiency.	Ingredients essential to social efficiency.			Planes of efficiency.		
	Knowledge.	Habits and skills.	Attitudes.	Ability to maintain one's self regardless of how it affects others.	Ability to maintain one's self and not interfere with welfare of others.	Ability to maintain one's self and aid progress of others.
1. Vital: Health and physical development						
2. Vocational: Agricultural, industrial, commercial, professional, and domestic						
3. Avocational: Right use of individual and social leisure						
4. Civic: American and world citizenship						
5. Moral: Morality and religion, including social service						

As the above table shows, involved in the large objective of the school's work are five phases of efficiency—health or vital, vocational, avocational or leisure, civic, moral, and religious. These descriptive terms are so concrete that detailed explanation is unnecessary.

Concrete and satisfactory programs for the development of each of these phases of efficiency must be established in light of the ingredients entering into each of them. These the table shows to be knowledge, habits and skills, and attitudes. Further discussion as to the content of this terminology is unnecessary.

Not only must we strive earnestly to provide for all phases of the child's efficiency and for the ingredients essential to efficiency, but educators generally must be guided in reference to the thoroughness and efficiency of their work by a knowledge of the different planes of efficiency on which oncoming citizens may stop in their development. Manifestly, the ideal which should guide education is to raise every citizen possible to the highest plane of efficiency.

The basis for measuring the extent to which the guiding objectives in the schools of South Dakota meet the requirements of the objectives of the socialized school is the data gathered from the State course of study, the outlines issued in certain towns and cities to supplement the State course of study, and the bulletins issued by the superintendents of schools and the supervisory staffs in directing the execution of the course of study. The State course of study implies the aims or objectives in teaching the various subjects to a greater extent than it states them specifically, although this course

compares favorably with the average course of study in its attention to defining aims and objectives in the subjects of geography, arithmetic, language and grammar, and physiology and hygiene. No course of study as yet has attempted to show with reference to each subject just what its teaching should contribute to the establishment of each phase of efficiency—vital, vocational, avocational, civic, moral, or religious; nor has any course of study yet attempted to indicate just what knowledge, just what habits and skills, and just what attitudes should result from the teaching of each subject in the curriculum. Evidently, a more exact definition of the phases of efficiency to be ministered to through teaching and of the ingredients to be established is desirable.

The State course of study in physiology and hygiene is a fairly satisfactory model from the standpoint of stated aims in teaching of what all courses of study should do. Even it, however, is not sufficiently detailed and specific. Preceding the directions for the work of each year, however, the aim is indicated. The following sentences will illustrate: The aim in the work of the fourth year is—

to strengthen the child in habits of right living; to make him act automatically in the matter of caring for himself; and to give him understanding, in so far as he is capable of knowing, about the necessity of precaution in every case of danger; to correlate the work in this subject with the work in every other subject in such way that there may be no sharp distinctions.

The aim of the sixth year work is—

to have the pupil get an idea of some of the laws of nature that help to maintain health.

The aim of the eighth year work is—

to fix definitely in the mind of the pupil the real value of a sound body and a sound mind. The pupil should be taught that good health is the best thing in the world; that his success in life will depend largely upon his ability to do his part of the world's work, and that his ability to do his part will depend entirely upon his physical and mental fitness.

The aims as stated are not quoted in full, but the sentences quoted are illustrative of the definiteness with which the aims in the teaching of physiology and hygiene are indicated.

The failure of a course of study to state aims adequately may be somewhat satisfactorily atoned for if the concrete results expected are fully illustrated. In this respect, however, the State course of study is lacking. It does this most adequately in the subjects of arithmetic and language and grammar. Even in those subjects, however, the results expected should be detailed much more fully, and illustrations easily understood by the average teacher should be provided.

The failure of a course of study to indicate aims and objectives in accordance with the terminology employed in the table above may

be fairly adequately met by indicating objective standards, such as the application of the standard tests in arithmetic, writing, spelling, geography, language, and silent reading has made it possible to establish. The limitation in relying upon the indication of objective standards is that they are not available for all the subjects and are not applicable to all phases of the subject matter in any subject, nor to all of the outcomes essential to social efficiency. The State course of study, however, has not supplemented its failure to state aims and objectives adequately by the indication of objective standards. Only one city reports having supplemented the State course of study by indicating objective standards as a guide to its teachers. Undoubtedly, however, in the immediate future, as the result of the initiative on the part of superintendents and teachers and as the result of the cooperative research work done by the Northern Normal and Industrial School, tentative objective standards will be available in many of the towns and cities for the guidance of teachers in their work.

The subject matter of the socialized school.—The second essential of the socialized school is an appropriate body of subject matter and an appropriate body of opportunities and activities through which the objectives of the school may be realized. Many careful and extended studies of the last two years have made it clear that only those materials which have large value in relation to the outcomes sought through education should be retained in the curriculum. The criticisms of the content of the State course of study appearing elsewhere apply here, and need not be repeated.

It can not be considered, however, that satisfactory progress has been made in the socialization of the curriculum for the towns and cities of South Dakota until all obsolete, functionless subject matter has been eliminated therefrom, nor until such enrichments of the curriculum have been made as modern progress in all fields of knowledge make possible. The various studies (particularly those in Part of the fourteenth, sixteenth, and seventeenth yearbooks of the National Society for the Study of Education, being the reports of the National Education Association Committee on Economy of Time pertaining to minimal essentials in the elementary school subjects) are available as guides in determining the subject matter which should be taught in the various elementary school subjects. It can be considered that any final studies have been made, but no course of study which is not formulated with due regard for the recommendations in the efforts above referred to—to formulate minimal essentials—can properly be considered to be socialized to extent even that is possible with present knowledge.

From the standpoint of desirable differentiations in the upper grades, the curriculum in the towns and cities of South Dakota is

hardly satisfactory. As was pointed out elsewhere, no community can properly be said to have a junior high school. The opportunities offered, with slight exceptions, in three cities to the pupils in the upper grades are the traditional seventh and eighth grade course of study in use in all schools throughout the United States.

Provision should be made for enabling the pupils of these grades to elect work in keeping not only with their abilities and dominant interests, but in keeping with their immediate educational and vocational intentions. In view of the varying differences in children, provision is not made adequately by the traditional uniform course of study.

The standards of the socialized school.—The third essential of the socialized school is the standards needed for guidance in all the details of the school. These standards are of three kinds, at least: (1) Those pertaining to discipline; (2) those pertaining to equipment; and (3) those pertaining to attainment in work.

The standards of discipline to be maintained and the methods by which they are to be enforced are not discussed in the State course of study, nor in any of the bulletins of any of the superintendents included in this study. These standards can only be judged, therefore, upon the basis of the schools visited. Of the 107 teachers seen at work in their classrooms by the observer, there were but five cases of poor discipline, in which the school was "running riot." In the other schools there was what is called "good order." The pupils were quiet and were busy about their work. The number of schools visited, however, in which there was evident freedom and naturalness on the part of the pupils was small. Predominantly, the children were holding their hands or in other ways securing the permission of the teacher to do common, ordinary things which they ought to be trained to do without interfering with the teacher's other duties, such as passing to the dictionary, passing to the wastebasket, consulting the library, consulting the atlas or wall map, and so on. A school could hardly be considered to have progressed very far in the matter of establishing freedom and independence and self-control in which the teacher stands guard, applying to every act of every child the standard which she has set to be maintained.

In the matter of equipment standards, the observer was unable to secure from any superintendent a standard list by which equipment was supplied to the schoolrooms of any grade or to buildings of any size or to schools of any particular type. As a guide to teachers and principals in making requisition for materials needed. a standard equipment list should be developed. The following standard building equipment list in use in a certain city will illustrate the meaning intended here:

STANDARD BUILDING EQUIPMENT.

Building.

Set of relief maps:
- *a.* World (4 A, 7 A).
- *b.* United States—2 (4 A, 6 B).
- *c.* North America (3 A, 4 B, 5 B, 6 B).
- *d.* Europe—2.
- *e.* South America (4 A, 6 A).
- *f.* Kansas (3d, 6 B).
- *g.* Asia (4 A, 7 B).
- *h.* Africa (7 A).
- *i.* North America—physical.
- *j.* South America.
- *k.* Europe—physical.

Balances (scales).
Reference books—New educational reference work.
Unabridged dictionary, to be kept in highest grade room.
Foster's history chart.
Globe.
Hectograph.
Paper cutter.
Pencil sharpener.
Printing outfit.
Sand table for each floor.
Scissors—2 sets.

Grades.

irst: Kindergarten chairs, pair of large scissors, sand table.
econd: Pair of large scissors.
ourth: Academic dictionary.
fth: Academic dictionary.
Sixth: Collegiate dictionary.
Seventh: Collegiate dictionary.
Eighth: Government map of Territorial divisions.

As was pointed out in the discussion of the course of study, the ainment expected in work is not specified in the towns and cities of uth Dakota in terms of objective standards, nor are concrete illustions given of the type of results which teachers are expected to ure from grade to grade in the various subjects.

Methods of managing and teaching. the socialized school.—The rth essential in the socialized school is appropriate methods of aging and teaching. In the matter of management, the busi- world has thoroughly demonstrated that the keynote in any rprise promising success is cooperation. The most progressive ol systems generally have likewise come to this point of view are modifying their attack accordingly. There is no longer any e for the "know it all," the autocrat, or the martinet in educa- any more than in business or government. In all of the school's lems or undertakings the cooperative attack must be employed.

e extent to which superintendents and principals in the towns ities of South Dakota work from this standpoint was only to be red from the reports regarding meetings held and from per- conferences with them. As was noted in the discussion of the e of study, the teachers participated in the development of these s in at least three towns and cities studied. There was internal ce that they had made contributions in two other cities. The ing notes left with the teacher following the superintendent's vidence a proper cooperative relation.

QUESTIONS ON THE ASSIGNMENT.

1 I careful in my assignments to state very definitely just what is to and how?

2. Are my assignments made orally or written on the blackboard so that misunderstanding is impossible?

3. Is a misunderstanding of the assignment ever allowed to pass as an excuse for not having the lesson?

4. Do I outline the next lesson, showing the main things to be noted, or the pupil's first introduction to each lesson obtained from his own study of textbook?

5. Is my assignment of the next lesson made by topic or by pages?

6. Do my assignments to supplementary reading state the book, the chapters, the pages, or is a topic given, leaving pupils to find it where they can?

7. Do I prepare the advance lesson before it is assigned?

8. Do I assign merely the amount to be studied for the next lesson, or do I show the pupils how to study it?

QUESTIONS ON THE TEACHER'S PREPARATION.

1. Do I outline the thought of the text on paper as I study it?

2. Does anything short of a complete understanding of the topic satisfy me?

3. Do I make use of (1) the reason, (2) hearing, and (3) sight to fix the idea in my mind?

4. Do I stop to think out illustrations and examples as I study?

5. Do I swallow whole what I read or do I insist upon evidence and proof?

6. Do I study while I study, or merely "spend time on my lesson?"

7. Do I study a subject from the point of view of teaching it?

8. Do I study, knit, talk, and eat peanuts at the same time?

9. Do I take time to think over and digest what I have studied?

The responses of teachers, principals, and superintendents in reference to cooperative relations with the public are indicative of good attack from this standpoint. The following table shows the cooperative activities, together with the distribution of the same, as reported by 593 elementary school-teachers in the towns and cities of South Dakota:

TABLE 75.—*Cooperative activities in 593 elementary schools in South Dakota towns and cities.*

Type of activities in which schools cooperated with the community.	Teachers in cities of 2,000 population or over.	Teachers in cities having a population of from 1,000 to 2,000.	Total.
Junior Red Cross organization	141	53	[illegible]
Food conservation	143	37	[illegible]
Thrift stamps and baby bonds	60	28	[illegible]
Gardens	63	9	[illegible]
Donations to Red Cross	33		[illegible]
Red Cross work	146	80	[illegible]
Sold Red Cross Christmas seals	48	27	[illegible]
Assisted in Y. M. C. A. drive or contributed	24	3	[illegible]
Red Cross members	25		[illegible]
Contributions to relief funds	17	1	[illegible]
Less candy, etc	3	3	[illegible]
Soldiers' library fund	7		[illegible]
Y. W. C. A. contributions	3		[illegible]
Assisted Liberty loan drive	4		[illegible]
Temperance	11	1	[illegible]
Own Liberty bonds	17	8	[illegible]
Subscription to local funds	15		[illegible]
Clean-up work	67	16	[illegible]
Tagged shovels	14	7	[illegible]
Nothing	4	5	[illegible]
Not reporting	26	12	[illegible]
	871	290	[illegible]

One superintendent reports the following community activities ided by the schools: Adult Red Cross work (participated in by eachers and pupils), Junior Red Cross auxiliaries, elaborate proram furnished for municipal Christmas tree, high-school boys were nlisted in farm work, everything possible was done to further the ood-conservation propaganda, thrift stamps, baby bonds, and Librty bonds were sold through the schools, "Tag your shovel day" vas observed, flower and vegetable gardens were planted throughout he community by the pupils, vacant lots were cleaned of rubbish nd cultivated. Doubtless this report duplicates certain items reported by the teachers from the city concerned in the table quoted above, but the list of undertakings in which the schools have cooperated with the community is presented as typical.

Evidence of the socialization of the methods of teaching and conducting the school activities of the children was altogether too limited. Too generally the school work visited evidenced that the children had studied paragraphs, pages, and chapters in their textbooks and were reciting them to the teacher rather than discussing them and sharing them with each other. For illustration, the observer listened to a 25-minute language lesson in a fifth grade in which the children attempted to define and illustrate and otherwise talk learnedly about monosyllables, dissyllables, trisyllables, and polysyllables. When the lesson had finished two or three of the brighter pupils understood intellectually what they had been talking about. Of course, even that mastery would soon pass, as the pupils would find the information of absolutely no practical use and therefore would have no occasion to employ it as would be necessary to fix it in memory.

In the matter of spelling also, although the common ordinary words in the examination papers and composition papers were found to be misspelled, in schoolroom after schoolroom the children were trying to acquire the spelling of such words as the following, taken from a fifth-grade assignment: Demeanor, Phrixus, Colchis, devour, execrable, infancy, bug-bear, delectable, Aetes, potentate, dethrone, obeisance, chiron, propriety, execute, solicit, rejoin, vulcan. In the seventh grade the children were not only to master the spelling of the following list but were to be able to write each word and mark it correctly diacritically during the spelling lesson: Authentic, ominous, vicissitude, venerable, maimed, current, commodities, farthing, species, tankards, billion, buccaneers.

In only 11 classes did the children talk with and to each other, asking questions of each other, differing with each other, and offering additional information on the topic or subject the child leading the discussion had reported upon. In two of these schools the children had a variety of books at their disposal and were discussing

a topic pertaining to the coal famine, which prevailed at that time, with considerable naturalness and ease. In seven lower-grade classes the children were engaged in playing games with naturalness and enthusiasm, being employed in the teaching of phonetics, spelling, and good usage of language.

The reports from teachers show that there was some attention given to combining rooms as a means of enabling one class to share its good work with one or more other classes. The following table shows the distribution of this tendency:

TABLE 76.

Rooms combined in school work.	Teachers in cities of 2,000 population or over.	Teachers in cities having a population of from 1,000 to 2,000.	Total.
Regularly	167	49	216
Not at all	56	40	96
Occasionally	120	44	164
Not reported	84	33	117
	427	166	593

The following table shows the types of program activities participated in by the rooms and the teachers of the towns and cities reporting:

TABLE 77.—*Types of program activities.*

Types of program activities participated in by rooms.	Teachers in cities of 2,000 population or over.	Teachers in cities having a population of from 1,000 to 2,000.	Total.
Special day programs	205	52	257
Red Cross	17	21	38
Music	4	4	8
Exhibits	.....	2	2
Public entertainments	100	29	129
Parents meetings	107	6	113
Regular assemblies	18	1	19
Reporting none	37	13	50
Not reporting	29	48	77
	517	176	693

One city supplied the observer with a number of programs which had been prepared for the purpose of enabling all of the grades participating to share with each other their good work. The following typical program is quoted as illustrative of the type of thing which should become more common:

OPENING PROGRAM.

Patriotic song	School.
Rhythms and games	Kindergarten.
Slumber song Boating song	Girls' chorus.
Danish dance of greeting	First-grade girls.
Halloween song	Seventh grade.
Washing the clothes Reap the flax	Intermediate grades.
Halloween parade	First-grade boys.
Sailor song	Boys' chorus.
Halloween	Second grade.
The story of a seed	Third and fourth grades.
Story of the Boston Tea Party	Doris Willard.

Boston Tea Party.

(Characters listed with names of pupils taking part.)

The Star Spangled Banner	School.

The following program was supplied by one of the smaller towns reporting:

Folk Dances.

First grade, 1. Bohemian; 2. Children's Polka	Miss Mangan.
Second grade, Bleking	Miss Waugh.
Third grade, Bouree	Miss Krause.
Fourth grade, Ace of Diamonds	Miss Curry.
Fifth Grade, Rustic Reel	Miss Spensley.
Sixth and seventh grades, Maypole Dance	Miss Mangan.
Song, "Old Glory"	Chorus.

National Songs and Living Pictures.

1. America, "The Melting Pot"	Miss Waugh.
2. "Dixie"	Miss Waugh.
3. "Columbia, the Gem of the Ocean"	Miss Waugh.
4. "When Johnny Comes Marching Home Again"	Miss Waugh.
5. "Yankee Doodle"	Miss Curry.
6. "The Girl I Left Behind Me"	Mrs. Scott.
7. "Hail Columbia"	Mrs. Scott
8 "The Star Spangled Banner"	Mrs. Scott.

It should be remarked that recently erected buildings in at least five cities provide special facilities for promoting meetings of the entire school in assembly exercises. Evidently, teachers and principals have not had sufficient training in their normal school and university courses to show them the value of making use of these provisions and to equip them in ways of making profitable use of such facilities. Reports indicate that five superintendents are particularly anxious to provide facilities and equipment and in other ways en-

courage the social meetings of the school as well as encourage the of the school by the patrons and by civic organizations.

Measuring results of school activities.—The fifth essential of a socialized school is the securing of results which approximate ends set up for realization. The administrative plans must pro for the regular, systematic, and scientific checking of the resu which the schools are producing. This aspect of the work is thoroughly provided for in any town or city school system in Sou Dakota. However, superintendents and principals are to be co mended for their endeavors to cooperate with agencies in the ur versity or normal schools which seek to evaluate the results secur through the application of standard tests.

CONCLUSIONS AND RECOMMENDATIONS.

1. The law should provide for the responsible participation the superintendent of schools in the making of the annual repo "financial as well as educational, of all of the schools." This report is now made by the clerk.

2. In accordance with modern practice, higher qualifications tha are now required under the law should be enforced upon perso aspiring to be superintendents of town and city schools. In Sou Dakota, in addition to successful experience, the A. B. degree or a equivalent should be required.

3. The compulsory education law should be strengthened so tha if a child is instructed outside of a public school, the persons in structing shall possess qualifications equivalent to those required of teachers in the public schools.

4. All boards of education should transact their business without committees, except as special and temporary committees may be appointed to do specific pieces of work.

5. It would make for dignity and efficiency in the transaction of educational business if all boards were required to provide a public school office for the superintendents of schools and transact all school business there.

6. The law should define elementary schools (grades 1 to 6), intermediate (junior high) schools, and secondary schools (senior high), and provide for encouraging the development of intermediate schools.

7. Unless the provision of the law that all school-building plans shall be approved by the State superintendent's office will effectually reach the improvements needed in school plants, the law should specify lighting, ventilating, seating, gymnasium, auditorium, and fire-protection standards.

8. The law should definitely encourage the provision of educational and recreational advantages during the vacation season.

9. A law should be enacted requiring all boards of education to file with the State superintendent a copy of the printed rules and regulations governing the schools they control.

10. Provision should be made to insure the use of standard report and record forms, including the use of cumulative record cards in keeping the records of pupils.

11. The State course of study should be issued to towns and cities in such form as to encourage local initiative in modifying it to adopt it to local needs.

12. There should be State legislation regulating the minimum salaries teachers may be paid. Advancement in equipment up to a good standard should be compulsory and should be rewarded by annual salary increments.

13. Provision should be made through State and, perhaps, local communities to provide special facilities (1) for helping retarded children and for preventing retardation, and (2) for giving proper education to atypical children. If necessary, superintendents should be required to make a report annually showing pupil distribution by ages and grades that the extent of retardation, normality, and acceleration may be studied at least once a year.

Chapter XVI.

THE HIGH-SCHOOL SYSTEM.

Section 1. THE PROBLEMS OF THE HIGH SCHOOLS OF SOUTH DAKOTA

The high schools of South Dakota are for the most part small with few pupils and few teachers. They are widely scattered, but the great majority lie in the eastern third of the State. They are not recognized in the State law, so far as the distribution of funds is concerned. There is no high-school inspector. There are conflicting laws regarding the certification of teachers, forgotten clauses concerning the content of the program of studies, provision for some types of high schools that do not even exist.

That the present system of high-school instruction is not all that it should be is indicated in the following array of facts, favorable and unfavorable:

(1) *South Dakota has a smaller per cent of its possible high-school pupils enrolled in high school than any other State in the north central or western group, New Mexico alone excepted.*—If a person takes the data, for 1915, determines the number of children in the State 15 to 19 years of age, finds the per cent of the total population enrolled in public high schools, and then finds the ratio of this per cent to the number 15 to 19 years of age, he arrives at the per cent of those enrolled of those 15 to 19, which may be assumed as a fair measure of those who might be enrolled. If it excludes those under 15 who may be in high school, it includes many over 17 who have graduated. The facts are given in the following table.

TABLE 78.—*Per cent of population in high schools, North Central and Western States.*

States.	Per cent of total population enrolled in public secondary schools.	Per cent of total population between the ages of 15 and 19, inclusive.	Per cent of population 15 to 19 enrolled in public secondary schools.
California	2.39	8.2	29.1
Oregon	2.07	9.0	23.0
Kansas	2.26	10.1	22.7
Washington	1.86	8.7	21.4
owa	2.16	10.2	21.2
Nebraska	2.18	10.4	20.9
Colorado	1.73	8.9	19.4
Utah	1.92	10.0	19.2
ndiana	1.94	10.2	19.0
Michigan	1.78	9.6	18.5
daho	1.71	9.3	18.3
innesota	1.74	9.7	17.9
evada	1.14	6.4	17.8
ontana	1.36	7.9	17.7
hio	1.64	9.8	16.7
isconsin	1.64	10.1	16.2
inois	1.40	9.5	14.7
yoming	1.10	7.9	14.0
issouri	1.33	10.5	13.1
izona	1.07	8.5	12.6
rth Dakota	1.23	9.8	12.5
uth Dakota	*1.24*	*10.0*	*12.4*
w Mexico	.69	9.9	7.0

(2) *South Dakota stands well in the number of schools and of chers.*—In 1916 South Dakota had one high school for every 3,290 ple in the State, and one high-school teacher for every 970 people. e comparison with certain States is as follows:

LE 79.—*South Dakota and other States compared as to schools and teachers.*

States.	Number of schools in 1916.	Number of teachers in 1916.	Population in 1910.	Population— Per school.	Population— Per teacher.
ka	423	1,596	1,192,214	2,810	750
	606	2,891	2,224,771	3,660	770
	450	2,094	1,696,949	3,760	810
ota	279	2,288	2,075,708	7,440	907
Dakota	173	629	577,056	3,330	915
	568	2,901	2,700,876	4,500	930
akota	*177*	*601*	*583,888*	*3,290*	*970*
sin	312	2,224	2,333,860	7,460	1,040
n	410	2,602	2,810,173	6,890	1,070
	798	4,176	4,767,121	5,970	1,140
	512	2,240	3,293,335	6,440	1,470

South Dakota has more square miles per public high school any other State in the north central group.—This, of course, that while there is no great difference in the number of schools it of population, there is a large problem in regard to the size State and the sparseness of population. This emphasizes the ms of centralization of control, of inspection, and supervision.

TABLE 80.—*Square miles per high school, North Central States.*

	High schools.[1]	Area of State (sq. miles).	Sq. miles per high school.
Ohio	798	41,040	[illegible]
Indiana	598	36,354	[illegible]
Illinois	658	56,665	[illegible]
Michigan	410	57,980	[illegible]
Wisconsin	312	56,066	[illegible]
Minnesota	279	84,682	[illegible]
Iowa	606	56,147	[illegible]
Missouri	512	69,420	[illegible]
North Dakota	173	70,837	[illegible]
South Dakota	*177*	*77,617*	[illegible]
Nebraska	423	77,520	[illegible]
Kansas	450	82,158	[illegible]

[1] Number of schools reporting to Bureau of Education in 1915–16.

The study which follows will take up a few of the problems which these small, scattered, and poorly attended high schools are forced to meet. In general the problems are those which pertain to all the schools, not to a few; and they will be treated from the point of view of the State as a whole. These are (1) the problem of the program of studies, (2) the problem of adequate supervision, (3) the problem of State aid, (4) the problem of a proper teaching force, (5) the problem of economy in time of war, and (6) the problem of equalization of opportunity. In certain features each individual school will be compared with others.

Section 2. THE PROBLEM OF THE PROGRAM OF STUDIES.

So far as the State law is concerned the high schools of South Dakota are left practically free in their choice of subject matter. There is one clause in the law which prescribes that schools must teach the humane treatment of animals and that no experiments upon live animals may be tried in schools. Moral instruction is also required in every school in the State; this instruction to be given in truthfulness, temperance, purity, public spirit, patriotism, respect for honest labor, obedience to parents, and due deference to old age. Physiology and hygiene must also be taught with special reference to alcohol and narcotics, "as thoroughly as arithmetic and geography." All further regulation of the program of studies comes from the power given to the State superintendent of public instruction of inspecting all high schools and accrediting them to institutions of higher learning. This means that the State superintendent has the power to say to a school that a certain subject shall or shall not be taught at a given time. The school may obey or not as it sees fit, the penalty for failure to comply being the removal of the school's name from the accredited list, with the loss of prestige that goes with it. Only 86 out of 200 schools were accredited in 1916–17.

The regulations for the program of studies for the accredited high schools are as follows:

Constants: The constants or required subjects of an approved high-school course shall be—

	Units.
English I, II, and IV as defined in the high-school manual	3
American history and government	1
Algebra, to quadratics	1
Plane geometry	1
Science, one year's work in any of the following: (1) Physics, (2) chemistry, (3) botany, (4) zoology, (5) physiography	1

Electives: The electives of the course shall be—

Latin	4	Physiology	½
German	4	General science	½
French	2	Advanced algebra	½
English III	1	Solid geometry	½
Ancient history	1	Trigonometry	½
Mediæval and modern history	1	Physical training	[1] ½
English history	1	Public speaking	[1] ½
Economics	½	Vocal music	[1] ½
Physics	1	Manual training	([2])
Chemistry	1	Domestic science	([2])
Botany	1	Agriculture	([2])
Zoology	1	Commercial branches	([2])
Physiography	1	Pedagogy	([2])

A one-year high school shall offer English I, elementary algebra, and two electives; a two-year school shall offer English I and II, algebra, and geometry, and four electives; a three-year school shall offer six constants, including those offered for the two-year schools; while a four-year accredited school shall offer all of the constants and not less than eight of the electives. Credit will not be allowed for American history and government, physics, chemistry, or trigonometry if given before the third year of the course, nor for economics if offered before the fourth year.

What an effective high-school program should offer.—An efficient high-school program of studies should give to every pupil a maximum of knowledge and training which will be of real service in the life that he is to lead. This implies at least three points of emphasis. The pupil must be trained to earn a living, so that he will not be economically dependent upon his graduation from school. The pupil must be a good member of society, which implies that he must have good health, must be a loyal, patriotic, and public-spirited citizen, that he must be moral and upright, and that he must be able rationally to make good use of his leisure period. The pupil must have the most for his time in school. The program of studies must be adapted to the needs of the boy or girl who is going to drop out, quite as well

[1] In a four-year school only. [2] As defined in high-school manual.

as to the needs of the graduates. There are therefore at least three elements which a well-worked-out course of study should provide for: (1) Vocational direction, (2) cultural training, and (3) provision for those who drop out.

If a high school were equipped with a large teaching force and with boys and girls, all of whom were going into the same profession and all of whom were to remain in school full four years, it would be quite possible to have an efficient program of studies. This, however, is not possible in the high schools of South Dakota. Pupils are dropping out all along the four years of the course. A wide variety of occupations are followed by the graduates of these schools. Few teachers and narrow lines of work are the rule. The efficient program of studies for this State will therefore be the best compromise between the three elements, probable stay in school, probable occupation of the pupils, and the ability and capacity of the teachers to do the needed work.

The size of the schools of South Dakota, with their importance as shown by the number of teachers employed and the number of pupils attending, is given in the following table:

TABLE 81.—*Size of the schools in South Dakota.*

Number of teachers.	Number of schools employing.	Percentage of schools.	Cumulative percentage.[1]	Number of pupils attending these schools.	Percentage of pupils.	Cumulative percentage
		Per cent.	*Per cent.*		*Per cent.*	*Per cent.*
1	22	14	14	252	2.5	[illegible]
2	42	27	41	991	11.0	[illegible]
3	34	21	62	1,436	15.5	[illegible]
4	17	11	73	975	10.5	[illegible]
5	11	7	80	648	7.5	[illegible]
1–5	126	80	80	4,302	47.0	[illegible]
6–10	21	13	93	2,157	23.0	[illegible]
11–15	6	4	97	1,206	13.0	[illegible]
16–20	2	1	98	692	7.5	[illegible]
21–25	1	1	99	328	3.5	[illegible]
26–30	1	1	100	562	6.0	[illegible]

[1] Includes all given above each number.

These data are very significant when considering the possibilities of the program of studies. Nearly one-third of the high-school pupils in nearly two-thirds of the schools have but three teachers including the principal, to instruct them. Four-fifths of the schools instruct nearly one-half of the pupils of the State with a teaching staff of five teachers or less, including the principal.

The possibilities for real vocational training.—It is generally recognized that real training calculated to provide efficiency in a particular vocation is no easy task for the school. The Smith-Hughes Act and its administration by the Federal board have shown that a great amount of practical experience in the work in question

under shop or farm or home conditions is necessary to this training. The numerous rules and regulations that are being laid down show that it takes special training upon the part of the teacher, a special attitude upon the part of the school, special equipment, and much time. Vocational education is quite possible in some of the larger high schools in South Dakota. Here there are enough pupils, enough teachers, and equipment to carry out the enterprise successfully. In many of the smaller schools the only possibility would be that there might be enough pupils (nearly all) going into some one occupation, so that the entire attention of the school might be turned in that direction.

If the boys and girls entering in 1918 have anything like similar experiences to the boys and girls who have been in school since September, 1914, the conditions given below under Groups I, II, and III may be expected.

The following arbitrary classification was adopted on the basis of the returns received: Group I, high schools reporting enrollments of 110 or more; Group II, high schools reporting enrollments of 50 to 109, inclusive; Group III, enrollments of 49 or less.

Group I.—Of 100 boys entering high school, 50 will leave before the close of he fourth year, 27 will go on to college, 14 will go into trade or industry, 13 vill go on the farm, and 13 into business. Others will go into scattering ccupations.

Of 100 girls, nearly half will go on to school or college, about one-fifth will tay at home or marry immediately after leaving school, about 15 will go into ffices, and 23 will teach school.

Group II.—Of 100 boys and girls entering school, 40 will leave school before raduation.

Of 100 boys entering high school, 26 will go on to college, 25 will go on the irm, 10 into business, 6 into teaching, and 8 into trade or industry.

Of 100 girls entering school, 30 will go on to college, 26 will remain at home marry immediately after leaving school, 5 will go into business, and 34 will ach immediately after leaving school, only half of the latter remaining to aduate.

Group III.—Of 100 pupils entering school, 60 will leave before completing ur years' work. Part of this is due to three and two year schools, but this is ken account of in the data given above.

Of 100 boys entering, 24 will go on to college, 35 will go on the farm, 7 into isiness, 3 into teaching, and 6 into trade or industry.

Of 100 girls, 35 will go to college, 19 will remain at home or marry, 10 will into office work, while 29 will teach.

In all three groups college preparation is the type of work pur-ed by the greatest number. For the boys, commercial training and riculture rank next in order, the commercial training being of eater importance in the larger schools, agriculture in the smaller. or the girls, preparation for teaching claims the largest number, xt to college preparation. It is unfortunate for the rural schools South Dakota that nearly one-third of the high-school girls teach

without further preparation, and that one-half of these leave sc[illegible] before graduation.

The following is the distribution of pupils taking courses in t[illegible] high schools during the first semester of 1917–18. The number i[illegible] each subject indicates the number of pupils who have registere[illegible] a course in that subject, one pupil registering for two courses in t[illegible] same subject counting as two:

TABLE 82.—*Number of pupils registered in courses in the various subjects [illegible] semester, 1917–18, arranged in groups, for 157 schools.*

Subjects.	Group I (19 schools).	Group II (36 schools).	Group [illegible]
Total number pupils enrolled in schools	3,975	2,634	[illegible]
Number of registrations in college preparatory subjects:			
English	4,481	2,435	[illegible]
Science	3,154	1,516	[illegible]
Mathematics	2,824	1,333	[illegible]
Latin	1,189	982	[illegible]
Modern languages	1,017	510	[illegible]
History	1,889	1,309	[illegible]
Registration in vocational subjects:			
Commerce	1,511	492	[illegible]
Manual arts	1,067	508	[illegible]
Household arts	1,787	563	[illegible]
Agriculture	182	86	[illegible]
Teaching	96	134	[illegible]

The subjects offered by the high schools are given in the follow[illegible] table:

TABLE 83.—*Subjects offered by South Dakota high schools.*

Subjects.	Group I (19 cities).		Group II (33 cities).		Group III ([illegible]	
	Number.	Per cent.	Number.	Per cent.	Number.	Per [illegible]
English	19	100	33	100	82	[illegible]
Mathematics	19	100	33	100	81	[illegible]
Science	19	100	33	100	76	[illegible]
History	19	100	33	100	75	[illegible]
Latin	19	100	27	81.8	55	[illegible]
Modern languages	18	94.7	25	75.8	49	[illegible]
Commerce	12	63.1	15	45.4	26	[illegible]
Manual arts	15	78.9	16	48.5	7	[illegible]
Household arts	17	89.4	14	42.4	8	[illegible]
Agriculture	10	52.6	5	15.1	8	[illegible]
Teaching	4	21.0	3	9.0	3	[illegible]

Vocational training in the larger high schools.—It is quite possib[illegible] for the larger high schools of South Dakota to give real vocation[illegible] training. It takes money. It takes expensive and well-trained teach-ers. It takes equipment. The large enrollment in commerce is ju-tified by the experience of past classes. Nevertheless, when pa[illegible] experience shows that about the same number of high-school bo[illegible] enter trade and industry and agriculture as do commercial pursuits it is not right that over 1,500 shall be enrolled in commerce classe[illegible] over 1,000 in manual arts, and less than 200 in agriculture, partic-

larly as South Dakota is preeminently agricultural. In a similar way, only 96 girls are taking work in teacher training, while 25 per cent teach without further preparation. A few classes in methods of teaching the elementary-school subjects, with opportunity for observation and a limited amount of practice in the local schools, would serve to raise professional problems for these young girls which would tend to stimulate a better professional attitude and have the ultimate result of building up attendance at the normal schools.[1] For the schools of Group I, therefore, the committee recommends that—

(1) The emphasis being placed upon commercial work be continued.

(2) The emphasis being placed upon home economics be continued and that more work be given, if possible.

(3) The work in industrial arts and agriculture be greatly increased.

(4) The facilities for teacher training be increased. That four-year accredited high schools organize teacher-training departments in a fifth or graduate year, as recommended in Chapter XIX of this report.

For the schools of Group II, ranging in size from 50 to 109, it is difficult to recommend much vocational training. We find that at present about one-third as many are registered for commerce, home economics, and manual arts as are registered for college preparatory subjects. This is necessarily due to the size of the schools and the constricted condition of the program of studies. It is strange, however, that these subjects should be so popular, when few go into commerce or industry and when more than one-fourth of the boys go on the farm and more than one-third of the girls teach. For the schools of Group II, when it is at all possible to add work in vocational training, the committee recommends—

(1) That the facilities for the teaching of agriculture be greatly increased, even at the expense of commercial subjects.

(2) That the facilities for teacher training be increased.

(3) That home economics be further emphasized.

The schools of Group III, all with four teachers or less, half with two or one, represent a very difficult problem. Here, while the student bodies are small and equipment and apparatus meager, nevertheless the occupational features are quite distinct. More than one-third of the boys farm. More than one-third of the girls teach. Despite this fact, there are only 52 registrations in agriculture and 50 in teacher training out of 2,641 pupils. We can not pass over lightly the vocational responsibilities of these schools. Many of these small schools offer the only educational opportunities that are anywhere available for miles about. Nearly 30 per cent of the pupils go to these schools. They can not be neglected. The committee recommends that agriculture and home economics be empha-

[1] For details of teacher training in high schools, see Chapter XIX.

sized in the order named if any vocational education be attemp This, of course, is doubtful in these small schools.

The possibilities for cultural training.—Certain responsibilities high schools have in connection with earning a living. This we vocational responsibility. Certain responsibilities have been th upon the high schools that have connection with no particular tion. This we term cultural. The boys and girls that are tur out of the schools must be moral and upright. They must be l and patriotic, high-minded citizens of the United States, acqua and practiced in their duties and quite as well familiar with th rights. They must be healthy and capable of caring for their phy cal welfare. They must be able to make good use of their le period, to read the best, sing the best, appreciate the best. The coupled with good manners and a national and international ra than local point of view, mark the man or woman of culture. I here that the great duty of the American high school lies. So lo as the schools are small; so long as the teachers are few; so long as boys and girls are unable to decide the particular line of work wh they wish to follow; so long must vocational education be weak comparatively inefficient. But no matter how efficient vocational ed cation may in time grow to be, fundamental to it and far more impo tant in the long run is the training that turns out men and wom healthy, loyal, public spirited, moral, and capable of enjoyme High-school work that is capable of producing these results mu forever be encouraged.

This is of course the fundamental purpose of the college prepa atory work. The English is to teach elegant and clear expressio and to instill a love of the best. The sciences and history are the that the pupil may interpret life about him. Mathematics and la guage have their end here. The program of studies as it is at pre ent outlined takes cognizance of this. Still, there is a phase of i that may be improved. The great ends of health, citizenship, mo rality, and the leisure period may be aimed at more directly and sti may achieve college preparation.

The "core" of the program of studies as laid down is mathe matics and English. Much of this is highly necessary, but not uni versally so. The great emphasis should be laid upon English, upo the social sciences (especially history and government), and upon th natural sciences (especially those relating to health). The scho law recognizes health (narcotics and stimulants) and morality. Fa more effective provision should be made to widen the scope of the provisions.

It is just possible that the problem of securing culture is not a curriculum problem. Some teachers can teach Latin so that all these

hings come from it. Many more fail to do so. Some teach history o that patriotic citizens are produced. Many more fail to do so.

The school-teachers of South Dakota should firmly resolve that no student should leave the high school without having firmly fixed as a part of his equipment for the battle of life (1) high character; (2) good health and a knowledge of how to care for it; (3) a knowledge of our history and Government, of our habits and customs, of our ways of doing things, and a love of our country; (4) some acquaintance with the best things that have been thought and said; and (5) a well-mannered expression of life, in habits, dress, speech, writing, and in dealing with others. These gained, the people of South Dakota would reap ample reward for the expense of their high schools.

Provisions for the students who drop out.—It will be noted in the program of studies laid out by the State superintendent of public instruction that the three, two, and one year schools are only abbreviations of the four-year school. The assumption has been that students will go elsewhere to attend a full four-year high school after completing the shorter school course at home. It is evident, however, that this is not the case. Only 50 pupils in 100 finish the course as laid out. Half leave before graduation. Nevertheless, all are treated exactly as if they were going to graduate. No credit is given for American history before the third year, or for economics before the fourth.

Furthermore, the courses as outlined do not proceed upon the cycle system, which is designed to bring the work to a close, so that those forced to leave may not be left with a mere remnant of what they might have had.

The committee, therefore, recommends that:

(1) The work in the schools of South Dakota be conducted with a view to the needs of those who drop out as well as to the needs of those who graduate.

(2) The teachers be brought to realize that they are responsible in their high school for the final education of all the pupils that enter high schools.

(3) The high-school inspector and State superintendent and State course of study recognize this principle, previously neglected.

The compromise between these principles.—Vocational education, cultural training, and provision for varying stay in school are each difficult enough to provide separately. It is quite impossible to achieve them all equally well in any system of schools, not to mention the small high schools of South Dakota. The following suggestions are submitted for the schools of varying size:

(*1*) *The one-teacher high school.*—There are 22 of these schools. The curriculum varies from one to four years, the high school at Faith offering four years of work with but one teacher.

The committee recommends that the following standards be followed as nearly as conditions will permit:

(*a*) That one-teacher high schools do not offer more than two years of work.

(*b*) That teachers be permitted to teach eight periods a day, 30 minutes being deemed the proper length of period on account of the small number of pupils.

(*c*) That English, science (including physiology and hygiene), civics and history, and agriculture and home economics be made the core of the curriculum.

(*d*) That if there are more than 15 pupils enrolled, two teachers should be employed.

(2) *The two-teacher high school.*—There are 42 of these schools offering from one to four years of work in the 157 considered in this report. The committee recommends that the following standards be followed as closely as possible:

(1) Two-teacher high schools should offer not more than three years of work.

(2) The course of study should be adjusted both to those who are preparing for college and for those who are to stop school at the end of two years.

(3) That the major portion of the course be designed for culture, centering about English, science (as above), and mathematics or languages.

(4) That students not preparing for college be allowed to substitute practical arts for mathematics or language.

(5) That teachers be allowed to teach seven 35-minute periods, the small size of classes allowing this.

(6) The program of studies for the two-teacher high school would appear as follows:

First year.

COLLEGE PREPARATORY.	NONCOLLEGE PREPARATORY.
English.	English.
History (government and politics).	History.
Algebra.	Elective.
Foreign language.	Practical arts, agr., comm., or manual training.
	Practical arts, home economics.

Second year.

English.	English.
Science (hygiene and physiology).	Science.
Geometry.	Elective.
Foreign language.	Practical arts, agr., comm., or manual training.
	Practical arts, home economics.

This arrangement allows two teachers to carry two years' work, combines cultural with very meager vocational work, provides for those who drop out, and does all this on 12, or at the most, 14 separate classes.

(3) *The three-teacher high school.*—There are 34 three-teacher high schools, offering three and four years of work. The committee recommends, where three teachers are employed, that an additional year, or possibly two, comprising studies conforming to community needs, be superimposed upon the proposed two-teacher school. By suitable alternation this can be accomplished.

(4) *The four-teacher high school.*—There are 17 four-teacher high schools. Four years of work should be offered, the first two like the two-teacher school; the second two teachers strengthening the work of the last two years, and possibly teaching a class or two in the lower classes.

(5) *Five teachers and more.*—No specific suggestions can be made for each of the 42 high schools without intensive study. It is of course more easy for them to effect a suitable compromise between the three principles than for the smaller schools. The ultimate solution will depend upon a thoroughly competent high-school inspector who can not only travel about the State, but remain long enough in a school to study the situation and upon this as a basis give helpful counsel and advice.

Section 3. THE PROBLEM OF ADEQUATE SUPERVISION.

High-school education in the United States is in need of constant supervision. This is for the reason that the schools are relatively new, that the problems are so recent as to be imperfectly solved, and that the superintendent, principal, and teachers are unable to meet them efficiently without aid of some sort.

Supervision of the high school partakes of two kinds, supervision from within the school system and supervision from without. Improvement is needed in both kinds.

How to make supervision by the superintendent and principal adequate.—The high-school principal in South Dakota spends the major portion of his time in teaching. In the Group I schools (110 pupils and over) the median principal teaches three periods a day, the quartiles being two and four, respectively. In the high schools of smaller size the principal does more teaching, nearly as much as the teachers who are supposed to have little administrative work, the median principal teaching five periods daily, with four and six periods representing the quartiles.

It is not only true that the high-school principal in South Dakota spends a great deal of his time in teaching; he teaches many different subjects and is called upon to perform the difficult feat of preparing in many lines in which it is impossible for him to be a specialist. This is because of the need for readjustment of the program that comes from continual employment of new teachers.

Not only does the high-school principal spend a great deal of time in teaching; he has many other duties which leave little time for the supervision of teaching. In the large schools the median principal spends 50 hours a week on school work. Of this time he spends 13½ on teaching, 8½ in preparation for teaching, and the remainder on varying duties. It is important to note that he only finds 3 hours a week to spend in the supervision of teaching. In the middle-sized schools of 50 hours' work, the median principal spends 18 hours teaching, 15 hours in preparation for teaching and correcting papers, but only 2 in the supervision of the teaching of the other members of his staff. The principal of the small school spends even less. It should further be noted that in very few of the schools is there any further supervision.

Consideration of the data brought out in other sections of this study, the immaturity of the teachers, their brief experience, and their continual moving from place to place, securing very brief tenure in office, shows the need of the supervision of their teaching. The principals of the high schools are employed to teach and to handle various administrative details, but the supervision of the teaching of the school is lost in the rush. This is a bad situation and should be remedied. The committee recommends:

(1) That the State superintendent of public instruction incorporate in his provisions for the accrediting of schools a clause to this effect: "No school shall be accredited as a four-year accredited high school in which the principal shall teach more than three periods daily. No school shall be accredited as a three-year accredited high school in which the principal shall teach more than four periods daily."

(2) That in the increased State inspection recommended below additional work upon the problems of supervision be carried on by the inspector of high schools, with the idea of training high-school principals to supervise; and that in the small high schools the inspector spend much of his time in the supervision of teaching and in meeting with the teachers.

(3) That emphasis be laid upon the problems of supervision of instruction in all agencies that work to that end.

How to make supervision by the State department of public instruction more adequate.—At present the system of accrediting and inspection of high schools in South Dakota is altogether inadequate. The law merely makes the provision that the State superintendent of public instruction or his assistant shall have the power to inspect these schools and accredit them to institutions of higher learning. No high-school inspector is provided, and no provision is made for traveling allowances adequate to the needs of the schools or the size of the State. As was stated above, the State superintendent has certain power over such schools as desire to be accredited, but only 18 schools so far have complied with the regulations of the central authorities in this regard.

The schools of the State are largely bunched in the eastern third of the State. In the middle and western parts the schools are far apart, scattered, and not at all adequate to the needs of the boys and girls of those sections. This is, of course, very largely due to the sparseness of the population. There is only one high school (usually small) for every 400 square miles of territory. The areas are smaller in the more densely populated portion of the State and much larger in the more sparsely populated sections. Anyone who has spent time in traveling in South Dakota will also realize that train connections are not of the best, and that it is not easy to go from place to place in the State.

The high-school plan of inspection at present in force consists in utilizing a small portion of the time of the deputy State superintendent. The size of the State, the sparseness of the schools, and the difficulties of travel make this poor provision altogether inadequate. With large schools and ordinary problems it would be all too little.

In times like these, however, such a force for inspection can not be excused. Bigger problems are confronting the schools of South Dakota than ever before. Some one has to check up the schools and see if the work is satisfactory. The schools must be inspected that reports may be verified. This will be particularly necessary when State aid to high schools will depend upon their performance of certain duties. But the high-school inspector that South Dakota needs will not be a mere inspector or reporter. He must be more than an educational police officer. In a real sense he must be the teacher of the teachers in the high schools of the State.

There should be at least two inspectors, one with the sole duty of traveling from one to another of the small high schools, say of 100 pupils or less. The inspector of smaller high schools would have as his duty the collection of data for the State superintendent and the verification of reports. He should assist with the content of the program of studies, advise with regard to the purchase of books, and the content and management of the library, observe classes and confer with teachers, possibly hold teachers' meetings to the betterment of the work of the school. Each year he should pick out one problem of a special nature to carry to the schools of the State, with the idea of effecting general improvement.

There should also be an inspector or supervisor of large high schools. He should be a specialist in school administration, to assist the superintendents in the larger cities. He also should be an investigator and teacher, not only an inspector.

The permanent betterment of the high-school system rests upon these inspectors and upon their influence upon the State. If they are mere clerks, their influence will be little. If they are teachers

and men of ability, whose decision will either bring or fail to bring State money to the schools, they will command the respectful attention of the high-school teachers. Both men should have good training and experience in problems of high-school administration. They should have had at least two years of graduate work. They should be able to fill professorships in the State university. Their salary should at least equal what is paid superintendents in the larger cities of the State. They should be appointed by the State board of education from a list of eligible candidates recommended by the superintendent of public instruction.

The proper program of studies, the proper content of each subject, the proper government of the school, good relationship in athletics, an adequate system of records and reports, improvement in teaching and a realization of the true task of the small high school can come from a *continuous intelligent survey* of the State, made from day to day by these men, and *continuous teaching* following as a result of their efforts.[1]

Section 4. THE PROBLEMS OF STATE AID FOR SECONDARY EDUCATION.

It is probably true that the major portion of the power that the State governments in the United States have become accustomed to exercise over the local unit has been the result of subsidy from the Central Government. With the proceeds of the sale of public lands and with the remission to the local units of fines and poll taxes and other sources of income, the States found that they exercised a certain power over the governmental units within them.

This power has been used for three main purposes:

(1) To return to the various individual governmental units their share of State money not otherwise distributed.

(2) To help to equalize educational opportunity in various parts of the State, helping poor districts and sparsely populated sections to maintain good schools.

(3) To inspire the school boards of the State to progress by granting sums of money for various types of improvements.

As was shown in Chapter IX, only the first of these is secured by the present system of distribution of funds. The State *moneys are* distributed to the counties, and from the counties to the districts in proportion to the number of children within the county *above 6* years of age and under 21. This distribution is made regardless of

[1] The reorganized State department of education (Chapter V) is planned with provision for a division of secondary schools, in charge of a high-school staff. While work of high-school inspection and professional supervision undoubtedly will require the full time of two experts to make it fully effective, it may be wise to ask for one full-time inspector only at the outstart until other just as urgent needs in the State department shall have been met.

the kind of schooling offered, regardless of whether a high school is founded or not, and the only report that the district has to make comes from the report of the county superintendent. In return for the grant that is made, the State has very little power in saying how it shall be spent. If a district already has an elementary school and wishes to add a high school, no additional funds are given. If a seven months' term is provided in a certain school, and a nine months' term in another, no credit is given the school for the longer term. One school may have one teacher for 20 pupils, another four teachers, and still the State funds would be distributed in the same fashion. No provision is made for local need. No stimulus is given to local initiative.

This is a very inefficient method for distributing the school fund of a State, and it works an injustice to the pioneers of the State, those who live in the outlying districts. Where land valuations are low, where distances are great, and where there are relatively few people of school age, the provision of any facilities for high-school education is very expensive, much more expensive per pupil than in the more settled areas. No provision is made for this in the law. In this respect the law was once far more just than it is at present. When the Territory was granted statehood, there was nothing like the difference between one part of the State and the other. As the eastern third of the State has been settled and built up, it has received an increasing share of the State money.

Distribution of funds according to school population also has the effect of making for poorer schools and fewer of them. There is no incentive for a community to build a high school; nor is there additional aid. All the expense of the high school is placed upon that now needed for the elementary school.

This method of distribution of funds also has the effect of hurting the instruction in the elementary school. Effort is required to build up the high school. Money is required. It often happens that, when the high school comes in without additional State aid, the real strain falls upon the elementary school. This of course is unfortunate.

A further disadvantage of this type of wholesale and automatic distribution of State funds is that the State has no power to help remote and backward communities to better themselves. The State should grant those funds only upon the most complete cooperation of the district.

Plans of State aid now in use.—In general there are five ways in which States give financial aid to high schools which yield better results than the system now in use in South Dakota: (1) State aid for general high-school purposes; (2) State aid for high-school libraries and laboratories; (3) the use of State aid for the extension of high-school privileges to pupils who do not live near high school;

(4) State aid to special courses within the high school, such as agriculture, teacher training, citizenship, and the like; and (5) State aid for the founding and maintenance of special high schools, such as agricultural high schools,[1] normal training high schools, etc.[2] The first of these five methods is considered in this study because of its greater simplicity and because it is capable of including the others within it. Its features are as follows:

(1) The State establishes a high-school fund. This is not universally true, but many States have done so. For illustration, Wisconsin established a high-school fund of $100,000, Texas $50,000, Arkansas and West Virginia $40,000. The establishment of the separate fund has the force of putting the stamp of public approval upon high-school education. At the same time it protects the public elementary education of the State. One great danger in the establishment of high schools has been the fact that too often the elementary schools were not as well supported thereafter.

(2) Money appropriated according to need of the local units. The great difficulty with the present plan of distribution of South Dakota's school fund is that money is given regardless of need. The big schools, little schools, and no schools at all share alike in proportion to the population of school age. The second fundamental principle is to center attention upon these schools in the State that are *in real need of State aid.* Several plans have been devised to care for this. Massachusetts excludes from State aid all high schools in communities of 500 families or more. Arkansas, South Carolina, and North Carolina exclude towns having a population of 3,500, 2,500, and 1,200, respectively. Massachusetts also has a plan whereby every town having a taxable valuation per pupil in excess of that of the average of the State is thereby excluded from State aid. Missouri, just cited, gives this aid: The maximum tax stipulated in accordance with the valuation of the district. A district complying with all regulations receives $800 if its valuation is less than $300,000; $600 if its valuation is from $300,000 to $400,000; $400 if its valuation is from $400,000 to $600,000; and $200 if its valuation is $600,000 or more. It is clear that the best thought upon State aid is, at least for the present, to help the poorer and less populated districts to maintain good high schools.

(3) Money appropriated according to the efforts of the local units. Many States reward efforts of the local units by helping them, provided certain things are done. This may be incorporated in the original proviso, fundamental to any State aid. For instance, Mis-

[1] See Chapter XI.

[2] These plans are outlined in detail in the various State laws (see Bul. of Bu. of Educ., 1915, No. 47, for a digest of school laws), and commentaries upon them are found in Cubberley's "School Funds and Their Apportionment" and in Butterworth's "An Evaluation of Methods of Financing Public Secondary Education in the United States."

souri, just cited, gives this aid: The maximum tax stipulated by law is levied, provided a high school is maintained and a principal employed, provided each teacher is paid at least $40 a month, provided nonresident pupils are admitted at a reasonable fee, provided the average attendance of the previous year has been 15 or more, and provided it gives a year's course in agriculture. Such aid can not be more than one-half of the high-school teachers' salaries. A sum of money may be granted in proportion to the amount furnished by the local community, a sum according to the classification of the high school, a sum varying according to the daily attendance, a sum according to the number of teachers, or a sum according to the cost of running the school. Probably the best plan is to appropriate a lump sum of money to a school of a certain class, provided it meets standards laid down by the State department of public instruction.

Upon this as a basis the committee recommends that—

(1) The legislature create a special fund for the improvement of secondary education. (This should be set aside from the State tax, proposed in Chapter IX, or be an annual State appropriation in addition to and separate from the State school fund. It should include at least $75,000 annually.)

(2) This fund be utilized to aid districts that need it most.

(3) Aid be granted to high schools in proportion to the efforts of the local community on the following basis: A lump sum of $800 for a standard four-year high school; $600 for a standard three-year high school; and $500 for a standard two-year high school. (To secure this money the high school to be in operation 36 weeks, to follow the State course of study, to pay its teachers a sum double the State aid or receive proportionately less, to reply to and meet the requirements of the State superintendent for accrediting.)

This program of aid to the high school based upon the principles outlined above would go a long way toward establishment of a State-wide system of secondary education. It would help centralize control of secondary education. It would free the children of certain communities from the shortsightedness of members of certain boards of education. It would enable the State to exercise healthful control of the big investment which it has been making for years past.

With this established as a basis, it would then be possible, as the education in the State develops, to include other types of State aid, such as the establishment of other types of secondary schools and the subsidy of various types of subject matter, as is now being done by the Smith-Hughes Vocational Education Act.

The important thing for the people of South Dakota to realize is that special State aid for high schools is fundamental to their development; that these funds should be given with two ideas in mind, the one to encourage and reward effort on the part of the local community and the other to equalize educational opportunity for the boys and girls of the State; and that the future development and improve-

ment of these schools and the institution of new and better work are dependent upon this course. Montana, Minnesota, and North Dakota all follow this plan.

Section 5. THE PROBLEM OF A PROPER TEACHING FORCE.

The problem of securing a high-school teaching force that is capable of assuming in an efficient way the burden that is thrust upon it is as important a part of a program of school development as any other single feature. In order to make the improvement that is needed in high-school education, South Dakota must be able to train, employ, and hold competent teachers.

As indicated in Chapter XVII, the school laws of South Dakota provide for the certification of high-school teachers under five categories: (1) Life diploma; (2) State certificate; (3) vocational certificate; (4) provisional certificate; (5) first-grade certificate. Under the State law a teacher may teach in a high school in South Dakota if he has graduated from a standard college or from a normal school four years in advance of high school, or two years, if he has taken certain work in education. The law provides that these standards may be lowered for teachers of certain subjects, and that in some schools teachers may be employed who hold the first-grade certificate, meaning the equivalent of high-school graduation. This law is more or less ineffective, and to supplement it the State superintendent of public instruction has included in his specifications for a place on the accredited list the requirement that all teachers in four-year accredited high schools must have training equivalent to graduation from the State university, while in all other high schools the training must be the equivalent of a two-year normal course beyond a full four-year high-school course. It can thus be seen that the State superintendent in accrediting schools sets up higher standards than the State laws, and justly so. It must be remembered, however, that this ruling of the State superintendent has no effect unless the school wishes to be accredited, and that only about 40 per cent of the schools actually do become accredited.

Training of the teachers.—Without a great deal of patient study and personal conference it is almost impossible to secure an accurate idea of the exact training of a teacher. It is necessary to know the time spent in school, the subjects taken, the standing of the institution, and the character of the individual. Even then the information must be largely in the nature of an estimate. The data submitted below, therefore, are not to be regarded as scientifically accurate, but as the best means at hand by which the training of these teachers may be expressed.

TABLE 84.—*Training of high-school teachers in South Dakota, expressed in years beyond the high-school course.*

Length of training.	Teachers in Group I schools.[1]	Teachers in Group II schools.[2]	Teachers in Group III schools.[3]
No years beyond high school	0	0	10
One year beyond high school	8	6	13
Two years beyond high school	21	19	74
Three years beyond high school	7	8	28
Four years beyond high school	142	116	221
Five years beyond high school	26	6	7
Six years beyond high school	5	2	0
Seven years beyond high school	2	0	0
Median	4.0	4.0	3.7
Q1	3.6	3.6	2.4
Q3	4.4	4.3	4.1

[1] Schools having more than 110 pupils.
[2] Schools having 50 to 109 pupils.
[3] Schools having less than 49 pupils.

On the whole the high-school teachers seem to be comparatively well prepared, much better than the State law would require.

Experience of the high-school teacher.—The teachers in each school were ranked in order of length of experience in months, and the median secured for each school. The conditions are shown in the following table:

TABLE 85.—*Median experience of high-school teachers of South Dakota.*

Teachers' experience.	Group I.	Group II.	Group III.
Under 10 months	0	7	19
11 to 20 months	1	8	16
21 to 30 months	2	7	14
31 to 40 months	3	9	11
41 to 50 months	9	2	12
51 to 60 months	2	1	5
61 to 70 months	2	0	6
71 to 80 months	0	0	2
81 to 90 months	0	0	2
91 to 100 months	0	0	6
101 to 110 months	0	0	1
111 to 120 months	0	0	1
121 to 130 months	0	1	0
131 to 140 months	0	0	0
141 to 150 months	0	0	0
151 to 160 months	0	0	0
161 to 170 months	0	0	1

This table reads as follows: In Group I there were no schools the median of the experience of whose teachers was under 10 months; in Group II there were 7 such schools, in Group III 19.

The high-school teachers of South Dakota for the most part are relatively inexperienced.

Tenure of the high-school teachers.—It is true that teachers do not remain in one place. The median teacher in South Dakota high schools remains in his position but one year and seven months. This is not worse than in adjoining States, however. In Iowa the tenure is but one year and 10 days, in North Dakota one year and four and

one-half months, in Nebraska one year and two months. The following table shows the conditions in these four States:

TABLE 86.—*Tenure of office in four States as shown by the per cent of teachers in same place for a given number of years.*

Length of tenure.	South Dakota.	North Dakota.	Nebraska.	Iowa.
Holding place—	*Per ct.*	*Per ct.*	*Per ct.*	*Per ct.*
1 year	29	34	45	49
2 years	27	32	25	19
3 years	17	14	14	15
4 years	9	6	5	4
5 years	7	6	5	3
6 years	3	2	2	1
7 years	2	1	.....	1
8 to 30 years	5	6	5	3

Age.—The teachers of the high schools of South Dakota form a young group. The median age for men is 29.5 years, for women 26.5 years. Half of the men teachers are included within the ages 25 to 35; one-half the women between 24 and 32.

Causes of leaving the teaching profession.—The following questions were asked: Why do the high-school teachers leave the schools? Within the past three years (since September, 1914) how many teachers regularly employed on your high-school faculty have resigned? Of this number, how many resigned to study? How many quit permanently? How many resigned to accept another position in South Dakota? In other States? These data are given in the following table:

TABLE 87.—*High-school teachers resigning.*

Groups.	Schools in group.	Schools reporting useable data.		Teachers reported as resigning.		Teachers reported as resigning to study.		Teachers reported as resigning to quit permanently.		Teachers reported as resigning to take another position in South Dakota.		Teachers reported as resigning to accept a position in another State.	
		Number.	Per cent.	Number.	Average number.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Group I	19	18	94.6	208	11.5	15	7.2	57	27.4	29	13.9	107	51.5
Group II	35	28	80.0	127	5.2	8	6.3	52	41.0	24	18.9	43	33.8
Group III	104	73	70.2	204	2.8	26	12.7	68	33.3	72	35.3	38	18.7
Total	158	119	75.3	539	4.5	49	9.0	77	32.8	125	23.2	188	34.9

It has already been shown that the teachers of South Dakota remain but a short time in one place. From this table it can be seen that, of those who leave, about one-third quit the profession permanently, about one-third leave the State to teach in another State, and about one-fourth move to another school.

Load carried by these teachers.—To illustrate the typical amount and character of this work it was decided to find out the number of subjects taught by each teacher. Subjects were classified as

follows: English, ancient languages, modern languages, mathematics, United States history, other history, chemistry, physics, other science, commercial, pedagogy, normal reviews, industrial arts, domestic science, music, drawing, penmanship, physical training, and grade work. The number of subjects which these teachers taught is shown in the following table:

TABLE 88.—*Number of subjects taught by teachers in South Dakota high schools.*

Subjects taught.	Group I.			Group II.			Group III.		
	Men.	Women.	Total.	Men.	Women.	Total.	Men.	Women.	Total.
One	65	20	85	14	4	18	4	1	5
Two	73	31	104	42	14	46	19	4	23
Three	18	14	32	37	23	60	55	15	70
Four	3	3	6	13	9	22	45	25	70
Five				4	4	8	16	12	28
Six				1		1	5	8	13
Seven								3	3
Median	2.6	2.4	2.3	3.0	3.4	3.2	3.9	4.6	4.1

This means that in the schools of Group I most of the teachers teach two or three different subjects for which special preparation is needed, but an appreciable part teach only one. In schools of Group II most of the teachers distribute their efforts over two to four different subjects; in Group III they distribute over three and four, with as many teaching five as teach two. This, of course, has the significance of emphasizing broad preparation. High-school teachers in South Dakota for the present should not specialize in one subject, but rather should have two or three in which they are equally expert.

Salaries paid high-school teachers.—The salaries of high-school teachers in South Dakota are given in the following table:

TABLE 89.—*Salaries of teachers in the high schools.*

Salaries.	Group I.		Group II.		Group III.	
	Men.	Women.	Men.	Women.	Men.	Women.
$1,700	1					
1,600	3					
1,500	2	1				
1,450	1					
1,400	2					
1,350	4	1	1			
1,300	9	3				
1,250	3	1				
1,200	14	10	1			
1,100	2	11	1			
1,050	1	3				
1,000	10	13	1	1		
950		4	2			
900	5	20	4	3	1	
850	1	12	1	9		1
800	2	30	3	14	2	5
750	1	19	2	30		18
700		18	3	25	1	18
650		3	1	13	1	44
600		2		2	1	19
550		2			2	3
500						1
250						1
150					1	
Median	$1,228.50	$860.00	$875.00	$714.00	$675.00	$685.00

These data give in a complete way the material rewards gai high-school teachers (excepting principals) in the high s studied in South Dakota. The salaries of the principals are g in the following table:

TABLE 90.—*Salaries of high-school principals in South Dakota.*

	Group I.		Group II.		Group	
	Men.	Women.	Men.	Women.	Men.	W
$3,100 to $3,150	1					
2,200 to 2,250	1					
2,000 to 2,050	2					
1,900	1					
1,800	2		1		1	
1,700	5		3			
1,600	1		4			
1,550			1			
1,500	3		5		2	
1,450	1		2			
1,400	2		5		1	
1,350			1		1	
1,300		1	1		7	
1,250			3		3	
1,200			5		10	
1,150			1		6	
1,100		1			9	
1,050	1		1		2	
1,000	1	2			11	
950					2	
900		1	2	1		
850				1		
800				2	1	
750		1		1		
700				2		
Median	$1,715.00	$1,025.00	$1,435.00	$810.00	$1,111.00	$

The characteristic teacher.—The teacher that is typical of the h schools of South Dakota can best be described by the medians gi above.

The man teacher in the larger schools is over 30 years of age, h graduated from a four-year college, and has been in his present po tion nearly two years, after having taught three years elsewhe He teaches two or three subjects, more often two than three, and r ceives a salary of over $1,200, and if he is promoted to a principals can do better. The woman teacher is over 27 years old, has graduate from a four-year college, has been in her present position nearly tw years, having taught three years elsewhere. She usually teaches tw subjects, but is more likely to teach three than a man. She receive a salary of $860.

In the Group II schools the male teacher is just under 30 years o age, has taught but one year before coming to his present position and has taught nearly two years in this place. He teaches three sub jects and receives a salary of $875. The female teacher has graduated from a four-year college, teaches three or four subjects, has had ex perience and tenure equal to the male teacher, but only receives $71 in salary.

In the small schools the age and training of the teachers is very little different. The teachers are a little younger, not quite so well trained. The male teacher receives $675 and teaches four different subjects; the female teacher receiving $685 and teaches four or five different subjects, more often five than four.

About one-half of these teachers will leave their present positions this year, one-third to leave the profession permanently, one-third to teach in another State, one-fourth to take a place in another school within the State, and the remainder for varying reasons.

South Dakota has as good a teaching staff as the States which lie adjoining. The teachers are fairly well paid, well trained, and remain at their posts somewhat longer than the teachers in Iowa, North Dakota, or Nebraska. The weaknesses found are common in other States. The strong points in the State are not so strong that they might not be stronger.

Whatever there is of excellence in the situation is not due to the law concerning the certification of teachers. It comes solely from the office of the State superintendent of public instruction, who has made the schools live up to the standard set by him, with practically no authority.

Chapter XVII contains recommendations making provision for a gradual reorganization and unification of the certification laws. If these are accepted, certificates will, in due course of time, be issued to graduates of professional courses in normal schools and other professional schools only. It will also reduce the number of certificates to be issued. In addition to these provisions the committee recommends—

That five types of certificates, carrying certain privileges and granted only after certain requirements, be granted to teachers for high schools, viz:

First-grade high-school certificate.

Valid for life.
Good in any high school in the State.
College graduation, or its equivalent necessary for.
Twenty semester hours in education and psychology.
Five years of successful teaching.

Second-grade high-school certificate.

Valid for five years and renewable once.
Graduation from junior college, normal school, or its equivalent.
Ten semester hours in education and psychology required.
Three years of successful teaching.
Valid in all high schools, except four-year accredited high schools.

Provisional certificate.

To be granted to those who meet above requirements, experience alone excepted.

Vocational high-school certificate.

To be granted as at present, omitting foreign languages.

Special high-school certificate.

To be granted to those teaching in high schools in South Dakota before the passage of this act.

Valid for two years in any high school of the State.

May be renewed as often as desired by attendance and successful completion of four semester hours of work at a six weeks' summer session of a standard college, normal school, or teachers' college.

Section 6. THE PROBLEM OF SPEEDING UP THE WORK.

A number of agencies are combining to speed up the work of the public schools. The increasing demand for higher training for entrance to professions has placed emphasis upon economy of time. When the young physician has spent eight years in the elementary school, four in high school, two or three in college, and four in professional education, followed by a year or two as an interne, it would seem as if there had been some valuable time wasted somewhere along the line. The practice of 15 years of preparation for professional education is not warranted by experience in the French or English schools. This has had the tendency to increase agitation for speeding up.

The prospect of military training, consuming a year or two of a young man's life, will increase the difficulty. It will advance the age of entrance into professions nearly to 30. The result will be, without doubt, to cause the schools to do the work they are now doing in less time.

As a war measure, the speeding up of the high-school work will do much good. America needs trained men—the better trained the better. There will be bigger problems to solve. Many boys will be called from school at the age of 21 for military service. The public schools are confronted with the problem of giving even more training in less time. Anything that will tend to increase the speed with which our schools may work without decreasing the quality of the work will be of real service to the nation, not only in times of war but in the peace that is to come. Two features of the speeding-up process will be discussed here.

(*1*) *The schools may speed up the work by spending more time in teaching.*—Many of the schools in South Dakota were forced to increase the speed of school work either by lengthening the school day or by teaching on Saturday. This was true this year because of the failure of the coal supply, or because of the demand for early closing to assist in planting the crops. Good results were found as a result of this plan.

Another plan for speeding up the work of the schools is the institution of the summer high school, an institution which has become increasingly popular in the last few years. In 1916 there were summer high schools reported by 109 cities, the majority running for six or eight weeks. The plans, value, cost, and practice in the case

of summer high schools are set forth in Bulletin No. 45, 1917, Bureau of Education. It is plainly shown there that the plan is simple, the administration not complex, the results good, and the cost relatively little.

Wherever possible the schools of South Dakota should increase the length of their school day, week, and year. Credit for work so done and pay for the teachers should be proportionate to the time put in.

(2) *The schools may speed up the work by bridging the gap between the elementary and secondary schools.*—One great source of waste of time is the gap that lies between the elementary and secondary schools. The pupil is accustomed to certain treatment in the grades. He usually has but one teacher. He remains in one room. He is accustomed to certain subjects that he has taken for some time. Suddenly he is transferred to the high school. Here he moves from room to room. He is taught by different teachers. New subject matter confronts him. So difficult is it for him to accustom himself to the new order that he finds it hard to keep up. The greatest number of pupils drop out of the high school in the first few months.

From these arguments have come the agitation for the junior high school, a reorganization of grades seven, eight, and nine, the better to suit the needs of the age involved and to make a "lap joint" between the schools.

Seven of the schools answering the questionnaire reported junior high schools, two additional schools planning to have them next year. They are—

	Year established.
All Saints (Sioux Falls) School	1914–15
Madison	1913–14
Huron	1916–17
Rapid City	1916–17
Waubay	1916–17
Herreid	1916–17
Redfield	Planned for 1918
Owanka	Planned for 1918

These schools are planning to reorganize the work in an effective way.

It is not necessary, however, for the majority of the schools in South Dakota to have junior high schools. Quite as good an effect may be produced otherwise. This is true for a number of reasons:

(1) The high schools in South Dakota are not separate from the elementary schools. Out of 186 schools, 172 have the grades and high school both in one building. The teachers also spread between the work in the elementary and high schools.

(2) In many of the schools the upper grades and high schools share the same study hall. This is true in 35 schools.

(3) In 29 out of 122 schools there is departmental work in the upper grades, particularly in the seventh and eighth. This has the effect of making the work more alike in the two schools.

(4) In 17 out of 129 schools elementary-school pupils are allowed to take some high-school work upon certain conditions, such as "on trial," "upon ability," "fast group," and the like.

(5) In 48 out of 124 schools elementary-school pupils take part in the student activities of the high school, such as literary societies, athletics, etc.

While the small high school has the disadvantages shown in the previous sections of this study, it is probably true that it has the possibility of more completely solving the problem of the relationship of the elementary school and the high school than is possible in the cities, even where there is a junior high school. In buildings where both schools are located, where upper grade pupils sit in the high-school study hall, where both are taught by the same teachers, where exceptional grade children are allowed to start high-school work, and where the rest is on the departmental plan, where both elementary and high-school pupils take part in athletics and other social activities. then there is no gap. All that is necessary is a little careful planning on the part of the teachers.

The committee therefore recommends that the high schools of South Dakota take the following steps toward the solution of the problem of the elementary and high school:

(1) That the two schools be considered one school as much as possible.

(2) That the practice of teaching in both the eighth and ninth grades be encouraged.

(3) That exceptional elementary school pupils be allowed to take certain subjects in the high school, thus shortening the time for their high-school course.

Section 7. SUMMARY OF RECOMMENDATIONS FOR THE HIGH SCHOOLS OF SOUTH DAKOTA.

1. The creation by the State legislature of a special fund for the improvement of secondary education in needy districts, to aggregate at least $75,000 annually.

2. The enlargement of vocational training by—

   (*a*) Continuing and increasing the emphasis now placed on commercial work and home economics;

   (*b*) Increasing the work in industrial arts and agriculture;

   (*c*) Enlarging the facilities for teacher training.

3. Conducting the work in the high schools with a view to the needs of those who drop out as well as to the needs of those who graduate.

Amending the present certification laws to provide for grant- five types of certificates for high-school teachers.

. The strengthening of high-school supervision by—

(*a*) Requiring the principals to teach less and to supervise more;

(*b*) Increasing the amount and closeness of high-school inspection by the State.

. The appointment of one, and preferably two, high-school in- ctors.

7. The equalization of opportunity for all children to acquire a gh-school education through a system of competitive examination, holarships, and remission of tuition.

8. The speeding up of the work in the high schools by—

(*a*) Increasing the amount of time devoted to teaching;

(*b*) Spanning the gap between the grades and the high schools, and organizing junior high schools wherever practicable.

Chapter XVII.

THE TEACHING STAFF AND TEACHER CERTIFICATI

Problem of adequate teacher certification.—No phase of the s is more important, and none is in more urgent need of remedy. is an adequate teacher supply for the schools. It is undeniabl that for many years the teaching profession has been held in high regard in the United States than is its due; the teachers been ranked and rated more by their salaries than by their servi the public. Teachers' salaries are inadequate, and the profes requirements are correspondingly low. The profession has suf because almost any kind of amateur can get permission to in school children. If it were not that the average public school tea has given the public much more than he has received, it would h gone hard with the schools and education in our country.

The world war is making this already serious problem more acu Since 1914 the cost of living has increased by leaps and bou Teachers' salaries have also advanced, but not so rapidly as the co of living. Meanwhile, there is an urgent demand for competent pe sons in the numerous war industries; many are called to their co try's flag. As a result the schools may soon go begging for teache unless the public and law-making bodies of the States take the matt seriously in hand. Now, in the days of urgent need, is the right tim to secure the future of the teaching profession by making it poss for the profession to become *professionalized.*

Composition of the teaching staff.—But, first, who are the teache that have been intrusted with the education of school children i South Dakota? What is their number and preparation? Their teac ing tenure and remuneration? Their social status? And what is the probability that they will follow teaching as a life work? These an other questions are answered in the following paragraphs.

The State requires an army of more than 7,000 teachers to fill the elementary and secondary schools; of these nearly 2,300 must be renewed annually, because of the instability of the profession. The actual number of teachers employed has not varied much in the last five-year period. In 1912 there were in the schools 1,071 men teachers and 5,493 women teachers. Since then, the number of men has decreased slightly each year, and the women have increased

›rrespondingly. Thus, in 1916 there were 1,032 men and 6,025 omen teachers. Since the entry of the United States into the war ıere has been further marked decrease in men teachers. Women ›achers will undoubtedly increase steadily in numbers. While this ; to be expected, it is also quite essential to the welfare of the schools › keep in them as large a number of men teachers as possible. Par-

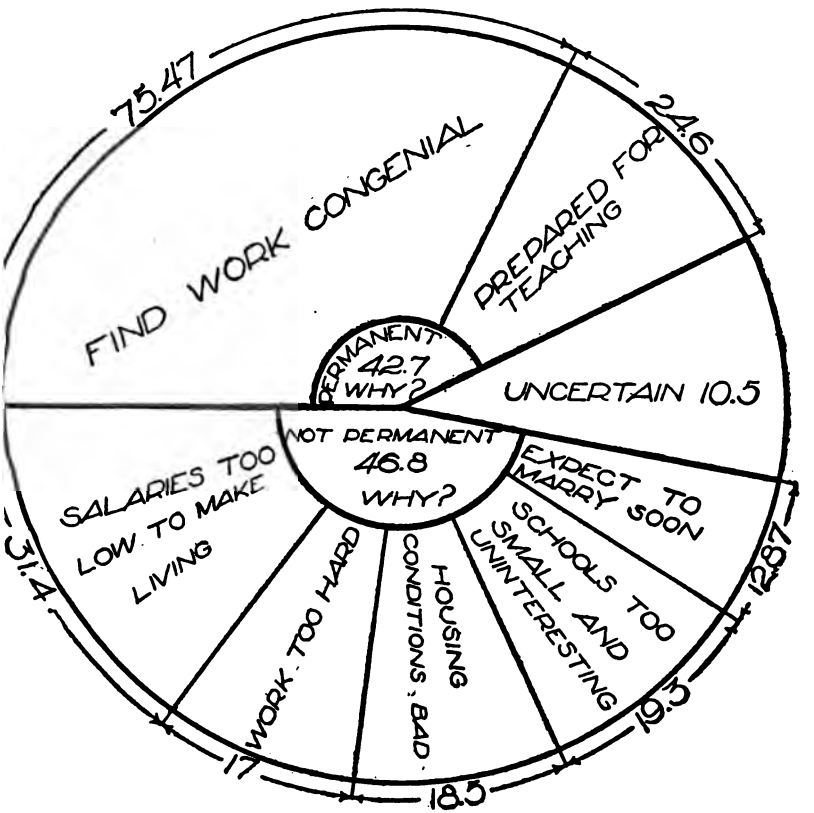

FIG. 16.

ticularly is this true if this great agricultural State is to realize its hopes of organizing the strong farm community schools discussed in a former chapter. But the teaching profession must first be stabilized and the opportunities in teaching be made the equal of opportunities in other callings. Without this South Dakota can not expect any large number of well-prepared, experienced men to remain permanently in the schools.

Cases of present instability.—Figure 16 is a graphic illustration of the above assertions. It is based on answers received from 3,941 rural teachers who were questioned in regard to permanency in the schools. Forty-six and eight-tenths per cent declared frankly that they do not intend to follow the profession permanently. And why? Thirty-one and four-tenths per cent find salaries too low for them to make ends meet financially; 17 per cent find the work too hard, chiefly because of bad hygienic and sanitary surroundings, long distance to school, many classes, etc. On much the same grounds 19.3 per cent declare the schools too small (in attendance) and uninteresting; 18.5 per cent find housing conditions bad, some using the expression "intolerable"; finally, 12.8 per cent expect to marry soon. Conditions in the village schools are practically as unsatisfactory as in the rural schools. Of 1,360 teachers, 39.1 per cent expect to remain in the profession permanently; 47.7 per cent desire to change for "more attractive and remunerative occupations" as soon as opportunity knocks. The rest are undecided.

Additional reasons for dissatisfaction are these: 913 teachers "find it advisable" to board and lodge with members of the school board: 741 teachers declare living conditions bad; unheated rooms, lack of privacy, poor cooking, and high cost of board are included in this list. Many complain that life in the country is lonesome and often unattractive; others find that the well-to-do people in the towns don't care to be bothered with the teachers. Here are reasons enough why many of the best young people in the State do not wish to invest much time and money in becoming professional teachers and why they do not remain long in the calling.

Length of teaching tenures.—What then is the length of teaching tenure in the different schools? Figure 17 shows that 31.2 per cent of the rural and 19.2 per cent of the village teachers are teaching their first school, and that only 9.6 per cent and 13.9 per cent, respectively, have taught as many as four schools. Few teachers have taught more than one or two years in a school. Finally, the average teaching life of a rural teacher is 3.76 school years, and of a village teacher, 4.95 years. Throughout it is found that the village schools are better stabilized than the rural.

Age of the teachers.—One of the greatest obstacles to establishing teaching on a professional basis, such as law and medicine, is the ease with which many persons, children almost, can get teaching credentials, particularly at the present time, when the demand has become exceptionally urgent. The law requires that "no person shall be entitled to a certificate who has not attained to the age of 18 years." Yet the questionnaires answered by rural teachers contain the names of 29 teachers under 17 years of age and of 53 who are just 17. How these persons have procured their certificates

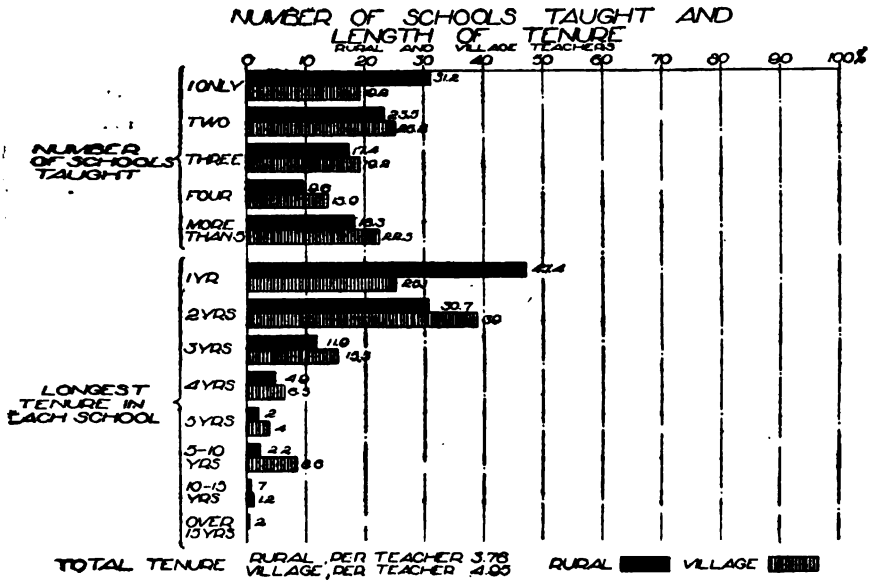
NUMBER OF SCHOOLS TAUGHT AND LENGTH OF TENURE
RURAL AND VILLAGE TEACHERS
0 10 20 30 40 50 60 70 80 90 100%
NUMBER OF SCHOOLS TAUGHT
1 ONLY
TWO
THREE
FOUR
MORE THAN 5
LONGEST TENURE IN EACH SCHOOL
1 YR
2 YRS
3 YRS
4 YRS
5 YRS
5-10 YRS
10-15 YRS
OVER 15 YRS
TOTAL TENURE RURAL PER TEACHER 3.78
VILLAGE PER TEACHER 4.00
RURAL
VILLAGE

Fig. 17.

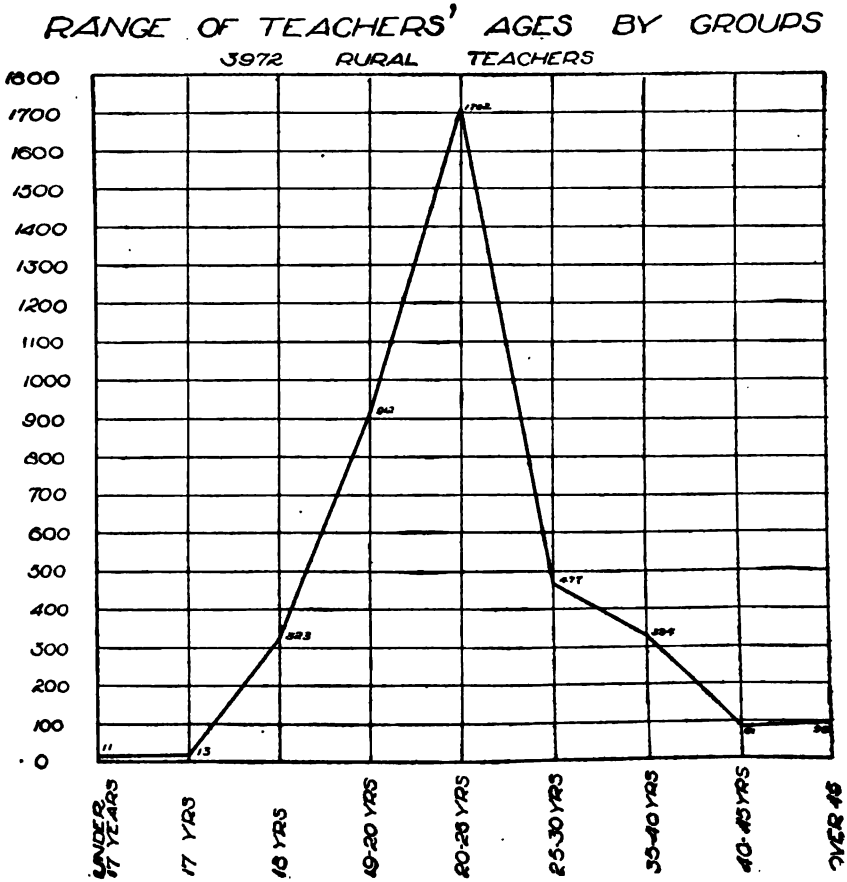
RANGE OF TEACHERS' AGES BY GROUPS
3972 RURAL TEACHERS
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
400
300
200
100
0
UNDER 17 YEARS
17 YRS
18 YRS
19-20 YRS
20-25 YRS
25-30 YRS
30-40 YRS
40-45 YRS
OVER 45

Fig. 18.

is hard to understand, unless they deliberately falsified their statements to the examiners. At any rate such youngsters should be attending school instead of teaching. The largest group of rural teachers (2,641) range between 19 and 25 years of age; while the largest group of village teachers (553) range between 25 and 30 years. For really satisfactory results there ought to have been a gradual increase from the 19 to 20 group well upward of the 30 to 35 group. Some day this must come to pass.

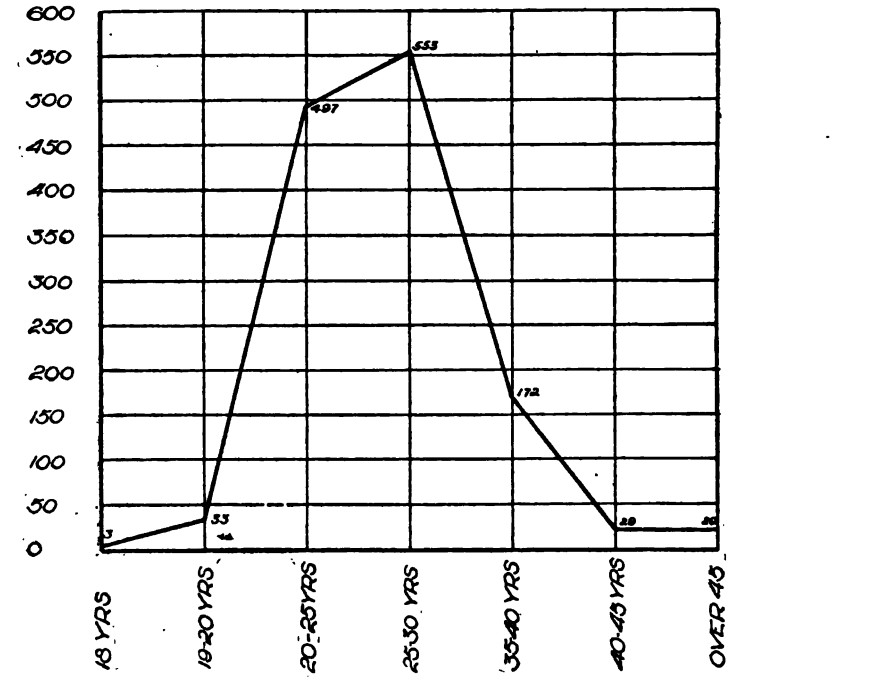

FIG. 19.

Marital condition of teachers.—Very few of the teachers are married. Out of 3,941 rural teachers reporting, only 434 are married; and in a total of 1,360 village teachers, only 210 are married. Very few except the married teachers have persons depending on them for support, there being 510 persons with dependents among the rural teachers and 264 among the village teachers. The small number of married teachers is another indication of the present instability of the profession. Well prepared, married men teachers can not be attracted to rural, or even village schools, before the permanent year-round community school is organized. It would also be

worth while to induce married women, with grown families, to matriculate at the normal schools, preparatory to reentering the profession. Such women would at least understand children.

Homes for teachers needed.—As stated in Chapter X, homes are urgently needed for the teachers, and organized as a part of the school plant. Of the rural teachers, 90 per cent live in the district where they teach; the other 10 per cent live mostly in near-by towns. But many declare the living conditions so bad that they "must give up teaching in the country or ruin their health." The trouble is that well-to-do farmers seldom care to be bothered with an extra boarder, and the homes of the poor are not fit for young persons who have probably been reared under more satisfactory conditions. The solution lies in the erection of modern teacherages as an integral part of the school plant.

Academic and professional preparation.—The village teachers have had better academic preparation than the rural teachers. It appears that some of the teachers reporting have not completed their elementary-school course. Most of these have, however, been enabled somehow to continue their studies in high school. Of the rural teachers, 58.3 per cent, and of the village teachers, 76.2 per cent, have completed a four-year high-school course. In high-school preparation the South Dakota teachers compare favorably with those of other Middle Western States. Unfortunately, very few have pursued college studies. The few in the rural-village group who are credited with college work are almost exclusively from the denominational colleges of the State.

Of the rural teachers, 45.8 per cent, and of the village teachers, 35.1 per cent record attendance in regula rcourses at professional schools. There is no explanation at hand why the village teachers should make a lower showing than the others. Of rural and village teachers, 54.2 per cent and 64.9 per cent, respectively, have entered the profession by the examination route instead of coming from the normal schools and the colleges of education. Figure 20 gives the places and institutions where the professional preparation was acquired. Almost one-fourth of the teachers responding came from other States. Of the rest, the normal schools at Aberdeen and Madison prepared almost one-half.

It is now generally accepted that no person should be allowed to teach in the schools unless he has completed a high-school course of four years, or its equivalent, and has had in addition a liberal professional training of at least two years. South Dakota is far from this minimum standard now; particularly is it true of the teachers' professional preparation. The plan of teacher training and teacher certification should be so arranged that certificates to teach would be issued by the State department only on credentials from teacher-

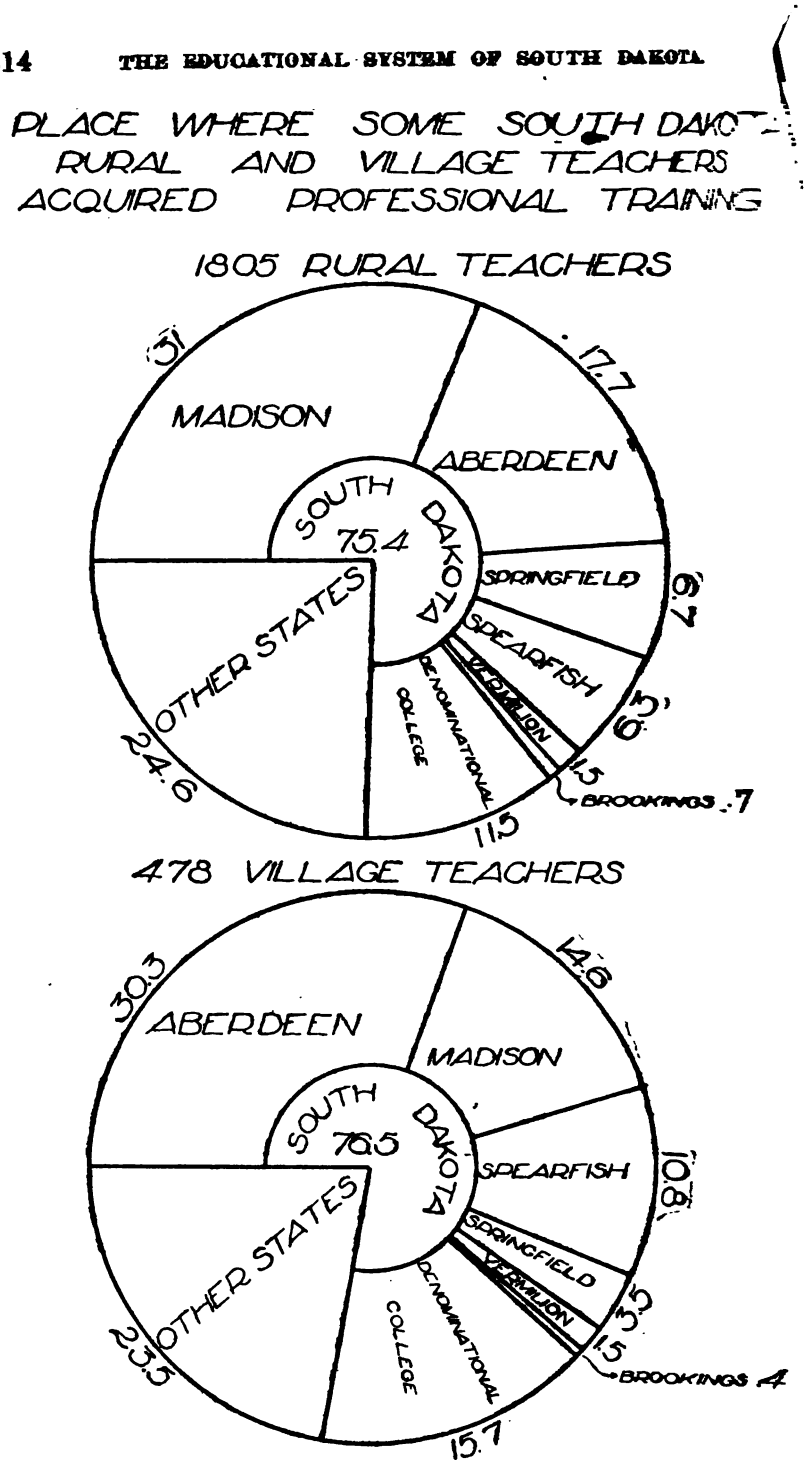
PLACE WHERE SOME SOUTH DAKOTA RURAL AND VILLAGE TEACHERS ACQUIRED PROFESSIONAL TRAINING
1805 RURAL TEACHERS
MADISON
31
ABERDEEN
17.7
SOUTH DAKOTA
75.4
SPRINGFIELD
6.7
SPEARFISH
6.3
VERMILION
1.5
BROOKINGS .7
DENOMINATIONAL COLLEGE
11.5
OTHER STATES
24.6
478 VILLAGE TEACHERS
ABERDEEN
30.3
MADISON
14.6
SOUTH DAKOTA
79.5
SPEARFISH
10.8
SPRINGFIELD
3.5
VERMILION
1.5
BROOKINGS .4
DENOMINATIONAL COLLEGE
15.7
OTHER STATES
23.5

FIG. 20.

training schools. As soon as possible, certification based on public examination should cease. Not till such time can the profession become truly professionalized.

System of certification.—The system of teacher certification used in the State is sound. All regular certificates are issued by the State department of education, through its certification division. The county superintendents may issue "special" certificates "to applicants who present satisfactory proof that they were unable to be present at the last regular public examination." The special certificates are valid only "until returns are made for next public examination for regular certificate of equal rank."

The regular certificates issued are[1]—

1. *Life diploma*—granted on examination and to graduates of the University of South Dakota and approved colleges, and of the South Dakota normal schools in courses of at least two years beyond high-school graduation.

2. *State certificate*—granted on examination and to graduates as in case of the life diploma. Range of examination, length of experience, etc., more limited than in above.

3. *First-grade certificate*—granted on examination and to graduates of certain courses in the State normal schools and accredited colleges.

4. *Second-grade certificate*—granted on examination, and to graduates of certain limited courses in the State normal schools and accredited colleges.

5. *Third-grade certificate*—granted to those who pass a satisfactory examination in orthography, reading, writing, arithmetic, physiology and hygiene, geography, grammar, United States history, civil government, South Dakota history, didactics, and drawing. The minimum grade required in any one subject is 60 per cent; required average, 75 per cent. No experience required. Certificate valid for one year only and is not renewable. On reexamination two such certificates only may be held.

There seems little excuse for continuing this grade of certificate. The second grade is certainly low enough. The same subjects are included in the examinations for both certificates, with the difference that for second grade the candidates must reach an average of 80 per cent, with no one subject below 65 per cent. The second-grade certificate ought to be established as the lowest grade of examination certificate until such time as certification through examination is abandoned altogether.

6. *Primary certificates*—granted on examination only.

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[1] For details of conditions under which these certificates are issued to the normal schools and colleges, see Chapters XVIII and XIX.

7. *Vocational certificates*—granted on examination to special subject teachers of cities and other independent districts.

Figure 21 shows that the chief dependence of rural teachers is on the second-grade certificate, 56.56 per cent of them teaching on this grade. Of the village teachers, 37.1 per cent hold State certificates. This is none too good a showing.

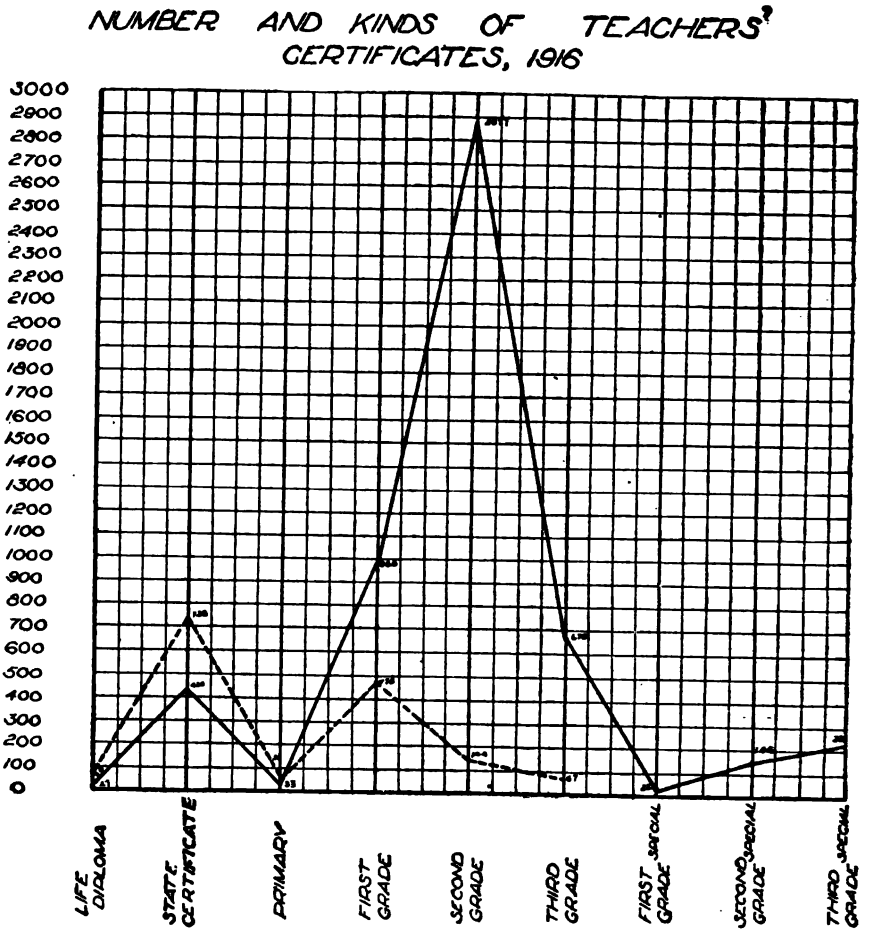

FIG. 21.

The solid line indicates rural teachers and the broken line village teachers

Compensation of rural and village teachers.—What compensation do the teachers receive? What, if any, is the relation between teacher preparation and efficiency, and teacher remuneration?

The salaries recorded (fig. 22) from the questionnaires are for the school year, which ranges from five to nine or more months. It should be kept in mind that the amounts herewith included are, as a

rule, all that the teacher earns in the course of a calendar year, and must support him throughout the vacation period, which many progressive teachers devote to summer school attendance. It is true, many teachers are obliged to canvass for books, sell insurance, etc., during the summer months. If law or medicine were so poorly paid that its practitioners would be obliged to find some other source of

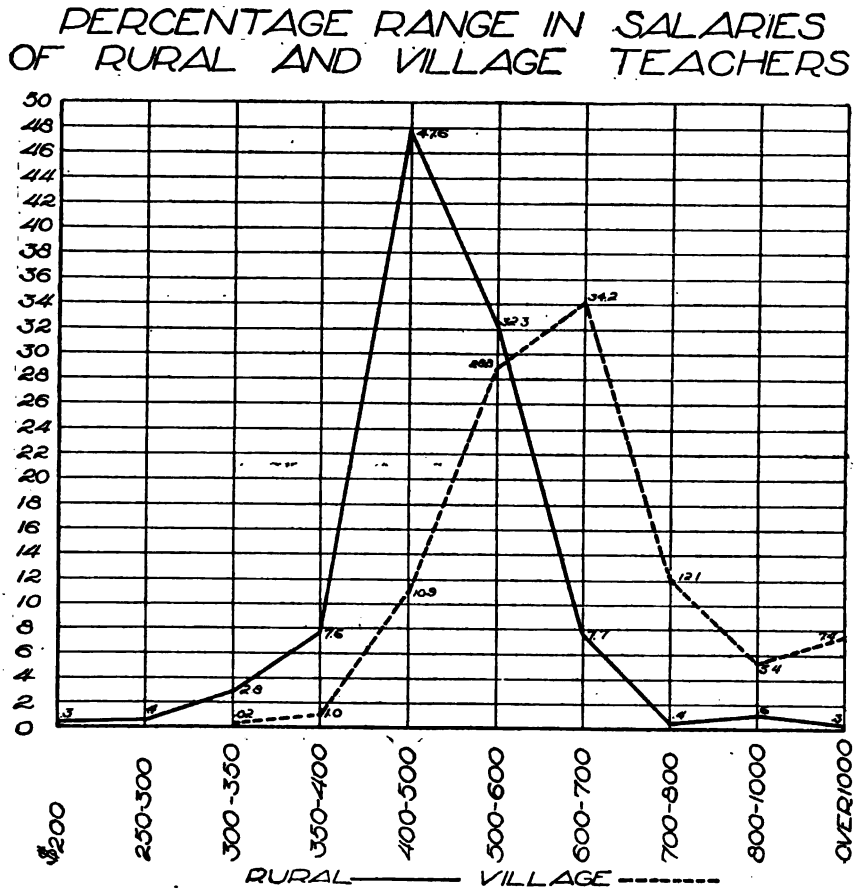

FIG. 22.

income during the slack periods, how many would continue in the profession?

The largest number of South Dakota rural teachers receive between $400 and $500 per annum. This is much less than a hired hand gets. Of the village teachers, 34.2 per cent receive between $600 and $700. From this point the graph drops rapidly.

Teachers are paid entirely too low salaries any way one looks at the problem. It takes both courage and devotion to one's work to

spend time and money on a thorough preparation, and then receive such beggarly returns on the investment. South Dakota should increase the teachers' salaries and make them worthy of the State. Other States are doing much better.

Table 92 shows conclusively that other Middle Western and Western States have all outstripped South Dakota in amount paid for salaries, and this State now stands lowest in the group of 23 States.

TABLE 91.—*Average length of school year in months, and average annual salaries paid public-school teachers (1915–16), North Central and Western States only.*

States.	Months.	Salaries.	States.	Months.	Salaries.
1. California	8.80	$998.45	13. North Dakota	8.63	$574.76
2. Washington	8.73	866.58	14. Kansas	8.19	572.69
3. Nevada	8.30	782.86	15. Missouri	8.09	559.74
4. Arizona	8.00	770.40	16. New Mexico	7.13	546.08
5. Illinois	8.20	750.85	17. Wisconsin	8.69	545.00
6. Idaho	7.75	742.81	18. Ohio	8.77	528.88
7. Utah	8.15	724.92	19. Minnesota	8.39	521.53
8. Montana	8.84	702.43	20. Iowa	8.50	517.65
9. Oregon	8.80	650.41	21. Wyoming	7.65	509.39
10. Colorado	8.35	632.85	22. Nebraska	8.18	438.45
11. Michigan	8.60	605.47	23. South Dakota	8.50	433.71
12. Indiana	7.75	580.32			

It is also suggestive to compare figures with salaries paid rural teachers in Saskatchewan, Canada. In a group of 1,982 teachers reporting, 46 receive from $600 to $700; 113 from $700 to $800; 838 from $800 to $900; 786 from $900 to $1,000; 199 from $1,000 up. Should South Dakota not do equally well?

Summary.—The problem of teacher supply, which has always been difficult, has become especially trying on account of the world war. Unless radical steps are taken by the State's educational leaders and the next legislature to improve teaching conditions by offering larger salaries, better housing conditions, and in other ways improving the status of the teachers, there will soon be a dearth of professional teachers. Eighteen counties were actually short of teachers when this survey was made, with conditions getting worse daily.

The State's teacher-training institutions have been unable to supply the schools with well-prepared teachers even under normal conditions. Many teachers have been attracted to the State from the outside, and many have come into the schools by the examination route, without any professional preparation whatever. The normal schools must be assisted to do a larger service than hitherto, and strong high schools should be drafted to help in the work.

Recommendations for professionalizing the teaching staff.—The greatest educational problem in South Dakota, then, is how to get and retain in the profession a sufficient number of well-prepared

teachers. Before teaching can be thoroughly professionalized, several things must come to pass: The public must become fully awake to its responsibility toward the teachers; it must make the schools and housing conditions more attractive than they are; and in other ways make possible long, well-paid tenures in the same community. The State must, by legal enactment, safeguard the profession and offer special inducements to all teachers to equip themselves well for their profession and make it their life work. Finally, the teachers must do what they can to attain genuine professional standards of teaching.

To these ends the survey committee makes the following specific recommendations:

1. Improve teaching conditions by—
   (a) Establishing reasonable minimum salaries for all teachers;
   (b) Scaling all teacher's salaries to the grade of certificate held, thus placing a premium on special preparation.
2. Require higher teaching qualifications by—
   (a) Increasing, gradually, the entrance requirements of the State normal schools and lengthening their study courses;
   (b) Eliminating the third-grade certificate;
   (c) Discontinuing the issue of certificates on examination as soon as the normal schools, the department of education in the university, and department of education of the State college, and other teacher-training institutions have become fully equipped to supply all the professional teachers required;
   (d) Placing the minimum requirement for permission to teach at graduation from an accredited four-year high school, or its equivalent, and in addition, at least one year's professional study, acquired at a professional school for teachers. The standard to go into effect not before September, 1922.
3. Increase the supply of professional teachers by—
   (a) Organizing teacher-training departments in not to exceed 20 fully accredited high schools well distributed over the State; the schools to organize the professional work in fifth-year courses, and to receive State aid;
   (b) Establishing well-equipped departments for rural teachers at all the normal schools. (See p. 240);
   (c) Enlarging the facilities of the State agricultural college to prepare teachers of general agriculture and teachers of vocational agriculture and home economics. (See p. 249);
   (d) Granting State bonuses to teachers as rewards for long service in a single school community;
   (e) Establishing a retirement fund for teachers.

The recommendations further detailed.—Every teacher who has devoted his time and money to preparing for teaching should be assured of a reasonable return on his investment. To this end the legislature should set a minimum of not less than $60 per month for the lowest-grade certificate.

Similarly, teaching rewards should bear a definite relation to expense and time incurred in securing a higher certificate. Sala ought, accordingly, to be based on the kind of certificate h There should be a legal minimum salary for each kind. Thus present second grade (the third grade not being considered) m receive the minimum of $60 and upward; first grade, 15 per additional and upward; State certificate, 15 per cent more than fi grade and upward; and so forth.

Long service in a single school community is good evidence of and ability. Moreover, nothing is more detrimental to school pr ress than constant change of teachers and administrative po The State should make reward for long tenure in the same com nity. Several States have found this good investment. Thu second year in the same school might be awarded with State ai the amount of $5 per month; a third year with $10 per mon and a fourth and each subsequent year with $15 per month. It should be made unlawful for local boards to curtail local salar by reason of these bonuses.

The fundamental reason for retirement pensions for teachers for any class of public employees, is the betterment of the servi The State is young and does not yet perhaps feel the need for retir ment of superannuated teachers so strongly as some of the old States. By establishing an adequate pension system now, howev while the problem is still comparatively simple, nearly all the fina cial difficulties that beset retirement plans can be avoided. Th exact details of the system should be worked out by a commit appointed by the governor, including both laymen and educato It is essential that scientific insurance principles be allowed to co trol in the drafting of a law, and expert actuarial assistance sho be employed from the outset. Any plan adopted should inclu financial support by both parties to the compact—the teachers a the State.

The third-grade certificate is a bid for immature and incompete persons to gain entrance to the profession. Even on the plea o teacher shortage such certificates are untenable. The surest way to obtain a good teaching staff is to eliminate the incompetents, sca up teaching requirements, and add dignity and satisfaction to teach ing by increasing its compensation to the level of modern living.

With proper financial support from the State and a reasonab enlargement of study courses and tightening of entrance requir ments the State's teacher-training institutions should be able within five or six years to provide all the professional teachers required. When this time comes to pass certification through public examination should be discontinued, except that permits to teach may be

sued to teachers from outside the State until their credentials can validated.

The minimum requirement for teaching (four-year high-school urse and two-year professional course) should not go into effect lly before September, 1923, in order to permit the teachers in rvice who may not now have these requirements to attain this inimum. The normal schools should establish a well-supported xtension service to reach all teachers who can not do the study under ne added requirement in residence. (For details see p. 238.)

All other recommendations are discussed in Chapter XVIII.

Chapter XVIII.

PREPARATION OF PUBLIC SCHOOL TEACHERS—TE STATE NORMAL SCHOOLS.

Section 1. FUNDAMENTAL PREMISES.

The State maintains four normal schools whose function is to pare teachers for the public schools. These schools are the source of teacher supply in the State. The University of S Dakota supports a department of education which devotes its gies, in the main, to preparing high-school teachers, school adm trators, and superintendents, and special-subject supervisors. T State College of Agriculture also gives courses in agricultural related phases of education to students of college rank. In a tion to the above, several denominational colleges and academie accredited under law to offer educational courses, on the comple of which certificates are granted by the department of educat Finally, several of the larger high schools have begun, in a s way, to offer educational courses for elementary teachers.

The teacher-training program determined largely by legisl enactment.—Neither the normal schools nor the other higher S schools are limited by the legislative acts creating them to prepar a specified grade or grades of teachers. The function of each sch has become delimited, largely through statutory legislation, un which students of the several schools may receive professional S and lower grade certificates upon completion of specified course study. The State board of regents of education have also followed consistent policy of limiting the major activities of the norm schools to the large elementary field in education and the other high State schools to the secondary field. The real anomaly in the edu tional field are the denominational colleges, which have the leg right to issue certificates, after approval by the State department education. Some of these schools have virtually the same, and some respects greater, privileges than have the normal schools, wi their much larger professional equipment. That the limitatio which are placed upon the schools may not in every respect redou to the best interests of teacher training in the State will appear lat in this chapter. Before proceeding with the discussion of the se eral schools, however, the committee desires to state what appear

to be good national policy in regard to the functions of the several State schools in teacher preparation.

The largest, and in many respects the most important, function of normal schools is to prepare an ample number of rural and other elementary teachers. For this task the normal schools are admirably adapted. Their teaching force and physical equipment have been selected for this purpose, and their general professional atmosphere has developed with this purpose in view, namely, the preparation of elementary teachers. This should not be construed, however, to mean that normal schools may not be permitted to realize the praiseworthy ambition and prepare subject supervisors and even high-school teachers, if they have their chief function well mastered, and if the State otherwise can use the service of the normal schools to good advantage in this field. If, by way of illustration, it appears that the university and colleges of the State, by reason of poor location or for other reason, can not supply the required number of high-school teachers, it would seem only reasonable to encourage one or more of the normal schools to assist in this work, provided, as before stated, that their other more important function be well looked after.

In the eastern States, notably in New England, the line is clearly drawn. Here the normal schools limit their activities to preparing elementary-school teachers. In other sections of the country the lines have not been drawn so close. The explanation is that in the Middle West, West, and to a lesser degree in the South, the normal schools have grown up contemporaneously with the State universities and colleges and have often become well established as the chief institutions for preparing all grades of teachers, while the universities centered their energies on organizing their schools of arts and science. Here and there the normal schools have developed into colleges of education, competing for prestige and patronage with the schools of education in the universities and colleges.

The comparatively large and expensive laboratory equipment required for adequate preparation of high-school teachers, administrators, and supervisors is already at hand in the universities and larger colleges, which is a consideration to be remembered when determining the field and functions of the schools. Without question, the universities and colleges are by reason of their organization and equipment the logical institutions to supply teachers for secondary schools and school administrators and supervisors.

The survey committee wishes to summarize the fundamental purposes and limitations of the teacher-training schools in an average State in the following brief terms:

1. The State normal schools are by organization and educational traditions best fitted to prepare every grade of elementary school teachers. This should be their chief function.

2. The university and college have the equipment and scholastic atmosphere necessary for adequate preparation of teachers for higher grades of work. They should accordingly limit their function to supplying secondary school teachers and school administrators and supervisors.

3. These limitations may be modified so far as the normal schools are concerned to include also preparation of special subject supervisors and even high-school teachers—

(*a*) Whenever it appears that the normal schools are fully occupying the elementary school field and have the time and equipment to give this type of instruction advantageously; and

(*b*) Whenever it appears that the universities and colleges of the State can not for good and sufficient reasons alone cope with the problem of supplying these teachers.

The State should determine the functions and limitations of the normal schools and schools of education.—As stated above, each of the South Dakota teacher-training schools has hitherto been held to a definite field of activity indirectly by legislative enactment and directly by decree of the board of regents of education. Unfortunately neither the normal schools nor the university and accredited colleges have been able to supply the large number of teachers that are required to man the schools. The normal schools graduate yearly good size classes for the elementary schools and small high schools, but the numbers are entirely too small to meet the demand. The university and the colleges each year send forth a few teachers who have majored in education in the regular college courses and some who have pursued regular normal school courses.

The tabulation given below contains the whole number of students graduated in 1917. The total number is 686. Of these, however, 125 are not teaching, leaving as net total in the schools 561, or about one-fourth the number required to fill vacancies occurring in the schools. Assuredly, many other teachers have gone out from these institutions during the year, have taken partial courses, or summer-school work; but these can not be classed with the professionally prepared teachers.

TABLE 92.—*Graduates of accredited teach-training schools in South Dakota, 1916–17.*

Institutions.	Total number of graduates.	Where teaching.				Total number not teaching.	Total number teaching.
		Rural.	Village.	City.	Place not given.		
Northern Normal and Industrial School	243	80	45	33	19	66	177
State Normal School, Madison	133	.....	.....	.....	.....	40	93
State Normal School, Spearfish	44	22	9	.....	3	10	34
State Normal School, Springfield	44	25	7	2	.....	10	34
University of South Dakota	7	.....	.....	7	.....	0	7
State College of Agriculture	17	.....	3	12	.....	2	15
Dakota Wesleyan University	31	7	15	.....	.....	9	22
Huron College	21	4	4	7	.....	6	15
Yankton College	22	5	9	3	.....	5	17
Lutheran Normal School	38	25	3	.....	.....	10	28
Augustana College	23	10	4	.....	3	6	17
Sioux Falls College	6	.....	2	.....	.....	4	2
Wessington Springs Junior College	27	13	7	.....	4	3	24
Ward Academy	24	20	4	.....	.....	5	19
Totals	680	211	112	64	29	176	504

Section 2. THE STATE NORMAL SCHOOLS.

Normal school control.—The normal schools are under the general control and management of the State board of regents of education. This is preferable to one board for each school. In one respect alone does this board fail to reach the best results of administrative efficiency, viz, in the manner of organizing its standing committees of two members for each higher institution, the chairman of each committee becoming, through professional courtesy, the controlling power in his particular school. This plan of standing committees is provided to expedite business and to look after local details. The survey committee believes that business details of this kind now looked after by the standing committees should be handled through the executive division of the State department of public instruction, whose chief might be made the permanent paid secretary of the regents. It would also be highly desirable that the pay rolls and certain other business matters of the higher institutions be attended to by the regents through the same division. This change is suggested to remedy the prevailing practice of circulating vouchers and other papers for approval and signature, which has been the cause of serious delay in payments of salaries and current expenses. It would also provide the regents with a permanent business office in the State capital.

Location of normal schools and distribution of students.—Two of the normal schools are well located geographically; the other two are, unfortunately, located on the borders of the State and not easily accessible. The Northern Normal and Industrial School is situated at Aberdeen, at the center of a network of railway lines,

which make it easy to reach from every part of the State accompanying map shows graphically that this institution

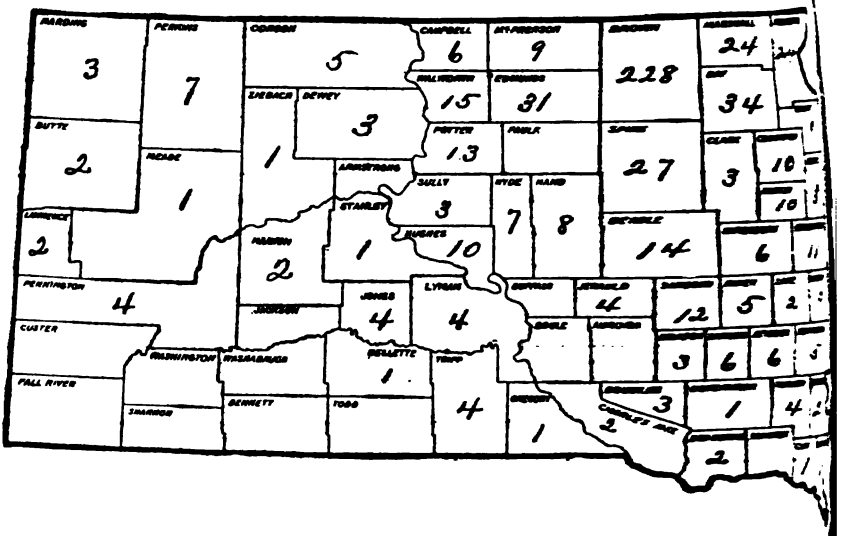

FIG. 23.—Map of South Dakota showing distribution of students in attendance at the Northern Normal and Industrial School at Aberdeen for the school year 1916–17.

its student body from every section of the State, more uniformly even than does the University of South Dakota.

The State Normal School at Madison has reasonably good railway facilities and has the advantage of being only a half-hour's train

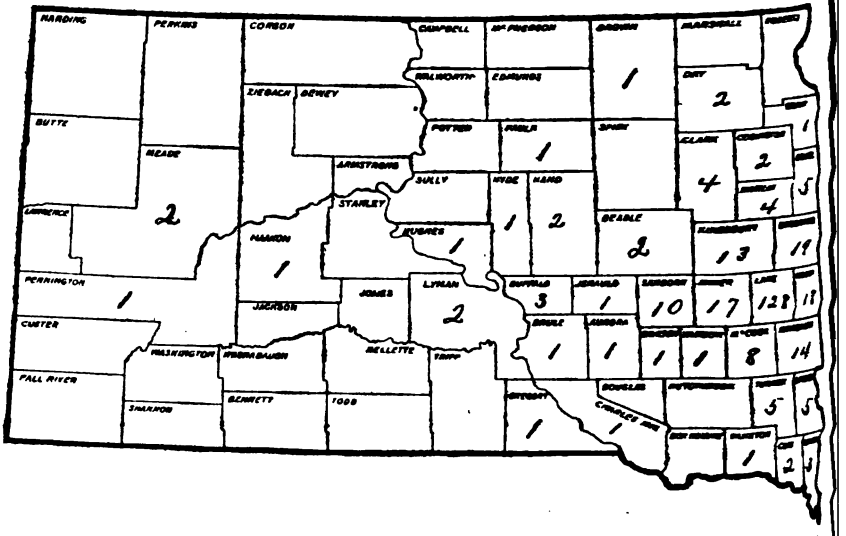

FIG. 24.—Map of South Dakota showing distribution of students in attendance at the State Normal School at Madison for the school year 1916–17.

from the metropolis, Sioux Falls. It is in the heart of a rich agricultural section, which should be a determining factor in the

organization of its work—the specialized preparation of rural teachers. This school has not attracted students so uniformly from the different counties as has the school at Aberdeen, partly because it has not been so well supported financially, and probably also because it has not taken advantage of its opportunities as they have come.

The State Normal School at Spearfish is the teacher-training school of the Black Hills section of the State, and its drawing power is largely limited to that area. The school is attractively situated, in healthful surroundings. It is difficult to reach by rail, but with the advent of the automobile stage this drawback is no longer of serious consequence.

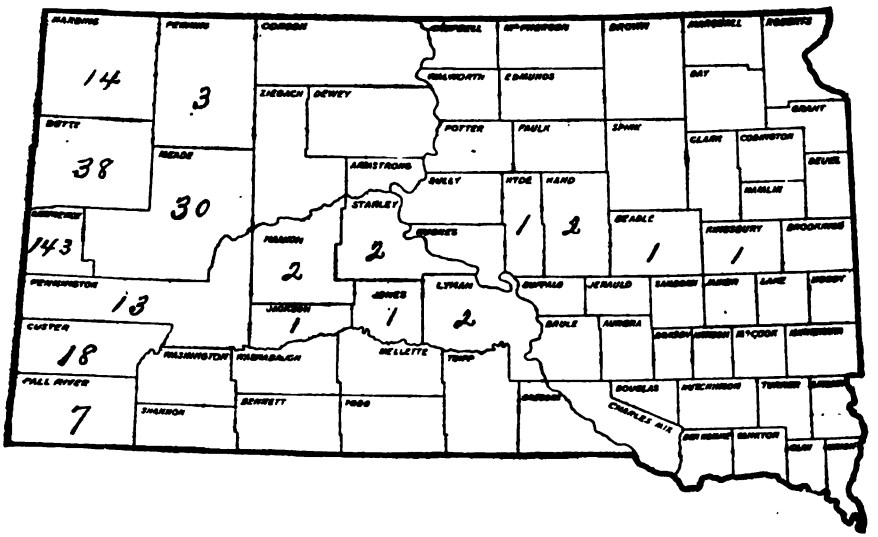

FIG. 25.—Map of South Dakota showing distribution of students in attendance at the State Normal School at Spearfish for the school year 1916–17.

The State Normal School at Springfield is the most unfortunately located of all the schools, lying, as it does, on a little-traveled branch line on the extreme southern border of the State. Its drawing power is decidedly local, a large majority of the student body being from Bon Homme County.

Were it not for the urgent demand for larger and still larger numbers of teachers prepared in normal schools the committee would feel justified in recommending that the school at Springfield be closed, and that the school at Spearfish be moved to a more accessible center in the Black Hills. This matter has been agitated in the State from time to time, probably to the detriment of the schools in question. The committee does not now feel justified in recommending the discontinuance of either of these normal schools,

but wishes to recommend instead (see end of chapter) certain changes in the activities of the institutions which may increase their immediate usefulness.

Who the normal-school students are.—Table 93 is compiled from data procured from the students of the four schools, called together solely for this purpose. The total number answering includes all in attendance except chance absentees and a few groups of practice students who were unable to leave their charges. The outstanding point of interest is that three-fourths of all the students were reared on the farm, their parents still making their living from the land. In a total of 1,209 students answering, only 852 intend to become teachers. This shows clearly that the schools are being utilized for

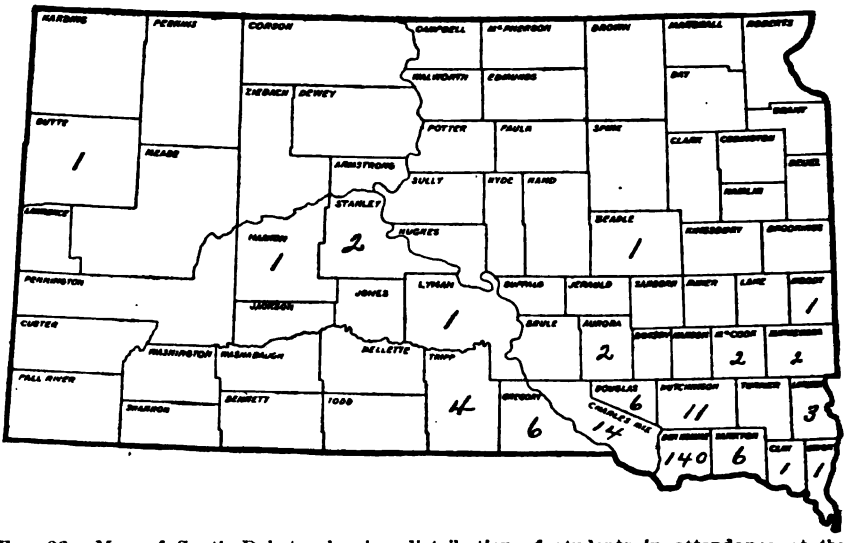

FIG. 26.—Map of South Dakota showing distribution of students in attendance at the State Normal School at Springfield for the year 1916–17.

academic purposes to an unusual extent. It is surprising to learn that the school at Aberdeen, which has charter rights to give industrial instruction in addition to its normal courses, has a larger percentage of students who expect to teach than either of the other schools. The percentages of students not intending to teach are, Aberdeen, 21.78; Springfield, 26.21; Madison, 34.40; and Spearfish, 37.90. The school at Spearfish draws many students from villages and the ranching country where there are no high-school facilities. It is the only high educational institution of any kind in the Black Hills, aside from the school of mines; as such it has unquestionably served a good purpose. Here is seen another argument for establishing a junior college in this section (see p. 257). It is not easily explained why so many students at Madison should not wish to teach. Springfield and Spearfish supply high-school facilities for their

respective villages, which further accounts for the large academic student body that does not expect to become teachers.

TABLE 93.—*Data pertaining to birthplaces, preparation, and probable teaching position of students in South Dakota normal schools.*

Data pertaining to students.	Name of normal school.				Total.
	Aberdeen.	Madison.	Spearfish.	Springfield.	
Number reporting	485	250	309	165	1,209
Where born:					
On the farm	353	180	160	118	811
In town	88	49	126	37	300
In the city	44	21	22	9	96
Not reporting	0	0	1	1	2
Total	485	250	309	165	1,209
Guardian's occupation:					
Farmer	337	184	200	120	841
Business	85	37	58	24	204
Professional	18	9	12	12	51
Artisan	34	20	38	8	100
Not reporting	11	0	1	1	13
Total	485	250	309	165	1,209
Intend to teach:					
Yes	377	164	190	121	852
No	105	86	116	43	350
Not reporting	3	0	3	1	7
Total	485	250	309	165	1,209
Intend to make teaching permanent occupation:					
Yes	312	164	144	75	695
No	142	86	161	49	438
Not reporting	31	0	4	41	76
Total	485	250	309	165	1,209
Where they expect to teach:					
In the country	217	151	142	108	618
In town	164	48	44	13	269
Not reporting	104	51	123	44	322
Total	485	250	309	165	1,209
Kind of teaching:					
Elementary	90	67	153	12	322
Intermediate	92	11	29	13	145
High school	30	16	21	3	70
Rural school	157	75	81	93	406
Supervisor	11	0	1	0	12
Not reporting	105	81	24	44	254
Total	485	250	309	165	1,209
Desire to make rural teaching life's calling:					
Yes	86	33	154	43	316
No	355	166	130	80	731
Not reporting	44	51	25	42	162
Total	485	250	309	165	1,209
Under changed conditions would make rural teaching life's calling:					
Yes	175	89	111	87	462
No	266	110	70	33	479
Not reporting	44	51	128	45	268
Total	485	250	309	165	1,209

The students hope to teach in all grades of schools—rural, other elementary, intermediate, and high school, and as special supervisors. It is noticeable that the largest number expect to *begin* teaching, at least, in rural schools. Perhaps the most outstanding fact in the table is that, while so many were born and reared in the country, very few desire to teach there out of choice. This speaks volumes. But very many more express a desire to teach there under improved educational conditions. Apparently, then, the normal schools will be able to supply many more good rural teachers as soon as the public becomes aware of its responsibilities toward the profession.

Academic preparation and age of the students.—Table 91 gives the academic preparation at admission and age at completing the present course. In a total of 1,209 students, 603 come direct from the eighth grade. This is because many communities have little or no high-school facilities. It is gratifying that the next largest group (254) are graduates from four-year high schools. The ages of the students range according to expectation. Three groups (15, 16, and 17 years) will not yet have reached legal teaching age when the to the group not expecting to teach.
course is assumed to be completed. Many of these, no doubt, belong

From the above study these facts may be deduced:

(1) Students attending the normal schools do not all expect to teach.

(2) Very many rural-born students shun teaching in the country, knowing from their own childhood experiences the meagerness of teaching opportunities.

(3) Many rural-born students would be glad to teach in the country if teaching conditions were improved.

(4) The normal schools extend a service to communities without high-school facilities which might be done to better advantage by rural high schools, State junior colleges, and denominational colleges.

(5) The mass of the student body are too young to give the normal schools that atmosphere of maturity and professional seriousness which marks the students in the other State colleges.

TABLE 94.—*Data pertaining to entrance qualifications, ages, etc., of South Dakota normal school students.*

Qualifications and ages.	Name of normal school.				Total.
	Aberdeen.	Madison.	Spearfish.	Springfield.	
Number of years completed above eighth grade at time of entering normal school:					
None	177	127	184	115	603
One	41	26	42	25	134
Two	60	38	31	11	140
Three	22	2	19	6	49
Four	163	57	27	7	254
Five	12				12
Six	4				4
Not reporting	6		6	1	13
Total	485	250	309	165	1,209
Age at time of completing present course:					
Fifteen	2	1	0		3
Sixteen	7	5	0	5	17
Seventeen	20	27	16	22	85
Eighteen	116	81	66	53	316
Nineteen	81	57	70	44	252
Twenty	90	40	55	19	204
Twenty-one	60	16	50	9	135
Twenty-two	33	9	21	3	66
Twenty-three	31	1	11	4	47
Twenty-four	17	2	5	2	26
Twenty-five	10	2	6	0	18
Twenty-six	2	2	2	1	7
Twenty-seven	7				7
Twenty-eight	4				4
Twenty-nine	3				3
Thirty					
Thirty-one					
Thirty-two					
Thirty-three					
Thirty-four	1				1
Forty-two	1				1
Fifty-four			1		1
Not given		7	6	3	16
Total	485	250	309	165	1,209

Justification for the presence of academic students in the normal schools.—Of the 603 students reporting normal-school entrance direct from the eighth grade, many are registered in the elementary and intermediate courses and expect to become teachers, but a number of students are in attendance to acquire an academic education. The normal schools are justified in making provision for such students coming from communities without high-school facilities, who wish to pursue the normal-school courses, since it would be impossible otherwise to obtain a sufficiently large number of academically prepared students for the professional courses. On the other hand, the normal schools should refuse to accept purely academic students who could just as well acquire instruction elsewhere.

TABLE 95.—*List of graduates from the normal schools, 1917, and their occupations.*

Schools.	Course completed.	Enrolled.	Present occupation.											
			Teaching.					Attending school.	Home work.	Married.	Enlisted.	Government service.	[illegible]	[illegible]
			Rural.	Village.	City.	Place unknown.	Total.							
Aberdeen	Advanced	60	12	20	15	3	50	3	...	...	...	1	1	...
	Normal manual training.	2	...	1	1	...	2	...	...	...	...	...	...	...
	Normal household arts	8	...	2	1	1	4	1	...	1	...	...	...	...
	Drawing supervisors	3	...	1	2	...	3	...	...	...	...	...	...	...
	Music supervisors	1	...	...	...	...	0	1	...	...	...	...	...	...
	Primary and kindergarten.	16	2	3	7	3	15	1	...	...	...	...	...	...
	Advanced industrial	3	...	...	1	...	1	1	1	...	...	...	...	...
	Intermediate normal	98	37	17	6	12	72	5	1	1	1	...	...	...
	Elementary normal	52	29	1	0	0	30	3	...	1	...	...	...	...
	Total	243	80	45	33	19	177	15	2	3	1	1	1	...
Madison	Advanced	14	...	...	...	...	...	...	...	...	...	...	...	...
	Advanced primary	11	...	...	...	...	...	...	...	...	...	...	...	...
	Intermediate	75	...	...	...	...	...	...	...	...	...	...	...	...
	Elementary	33	...	...	...	...	...	...	...	...	...	...	...	...
	Total	133	...	...	...	...	...	...	...	...	...	...	...	...
Spearfish	General	4	...	...	...	1	1	1	1	...	1	...	...	...
	Advanced	37	...	...	...	33	33	1	2	...	1	...	...	...
	Commercial	2	...	...	...	...	0	...	1	...	...	1	...	...
	Home economics	1	...	...	...	...	0	...	1	...	...	...	...	...
	Total	44	...	...	...	...	...	...	...	...	...	...	...	...
Springfield	Advanced	18	...	...	...	11	11	4	1	...	2	...	...	...
	Intermediate	15	...	...	...	12	12	2	...	...	1	...	...	...
	Elementary	11	...	...	...	11	11	...	...	...	...	...	...	...
	Total	44	...	...	...	34	34	...	...	...	...	...	...	...

It is deemed highly advisable by the survey committee that students and courses should be reclassified gradually, so that ultimately all students of less than high-school graduation be ranked as prenormal students and grouped in a prenormal academic department. This can be realized as soon as the professional courses are lengthened to one, two, or three years above high-school graduation instead of, as now, above eighth-year graduation.

Finally, the normal schools at Spearfish and Springfield are justified in furnishing their respective villages with high-school facilities through the medium of their practice schools and the elementary courses, because without this arrangement it would be impossible for either school to maintain its required practice school and because these students pay the required tuition fee.

Uniformity of fundamental courses in all the normal schools.—In 1911 the State legislature enacted a new law relating to granting teachers' certificates. Under its provisions second and first grade certificates, five-year State certificates, and convertible two-year provisional certificates are now issued by the State department of public

instruction to normal school and other accredited school students of prescribed age and attainments without examination. This is a long step in the direction of placing teaching on a professional basis.

The normal-school courses are planned to comply with the requirements of this law. They comprise three main courses—the elementary, intermediate, and advanced. The first of these meets the requirements for the second-grade certificate and embraces two years of study above the eighth grade; the intermediate course leads to first-grade certificate and embraces four years of study above the eighth grade; the advanced course leads to a life certificate and embraces six years above the eighth grade.

The schools, further, have a one-year course for high-school graduates, leading to first-grade certificate. In addition to all these courses, each institution offers certain other courses sanctioned by the regents and approved by the State superintendent. They appear in Table 95, which contains the number enrolled in each course, the kind of school in which teaching, and other occupation if not teaching.

Organization of study courses at Aberdeen.—The Northern Normal and Industrial School was organized in 1901. The object of its establishment was "to give instruction to persons of both sexes in manual training and in the industrial and mechanical trades, arts, and sciences and the allied branches of learning." The act creating the school is comprehensive and might be construed in such broad terms as to make it a competitor of the university and the agricultural college. This would have been unwise in the extreme. Fortunately, whatever ambitions the school may have had under former administrations have been directed wisely by the regents, with the result that the institution is satisfied to develop as a normal school, laying exceptional stress on the industrial subjects. In some particulars, however, the committee believes the school would do well to modify its study courses. The following is a statement of the present study courses:

ADVANCED.

(Six years from eighth grade.)

Normal, leading to diploma of graduation and to the State certificate and life diploma.

(*a*) General course.
(*b*) Normal-manual training.
(*c*) Normal-music supervisor.
(*d*) Normal-household arts.
(*e*) Normal-drawing supervisor.
(*f*) Normal-primary and kindergarten.

Industrial, leading to diploma of graduation and accrediting to junior university standing.

(*a*) General course.
(*b*) Manual training.
(*c*) Domestic arts.

INTERMEDIATE.

(Four years from eighth grade.)

Normal, leading to second-grade teachers' certificate, valid for three years.
Industrial, preparatory to technical or engineering courses.

ELEMENTARY.

(Two years from eighth grade.)

Normal, leading to second-grade teachers' certificate, valid for two years.
Industrial:

(a) Trade courses.
(b) Commercial course (may be completed in 36 weeks).
(c) School of agriculture (may be completed in winter terms comprising 38 weeks).

These courses have been approved by the State board of regents of education and by the department of public instruction, subject to the following general regulations:

On permission of the committee on extra credits, students may take 25 hours' work each quarter, this being the maximum amount permitted in any case. Thus the way is opened for 15 hours' additional elective work each year. (Regents' resolution and educational department ruling.)

These differentiated courses, which are taken from the 1916–17 calendar of the school, group all subjects as "normal" and "industrial" with subdivisions under advanced, intermediate, and elementary courses.

The general advanced course in the normal group represents six years of study above the eighth grade and "leads to full junior standing in the leading universities." The committee believes that this course should be abandoned. Young people who plan to attend university or college should enter those institutions as freshmen. Moreover, as a normal school is a unique, professional school, differing in aim from the purely academic institutions, it can in no sense be considered as a college preparatory school.

Subcourses b, c, d, e, f in the normal group are all advanced six-year courses, intended to prepare teachers and supervisors in these subjects. The equipment of the school is ample for this particular phase of school work, which is done so meagerly in the other higher institutions that the committee believes all these courses ought to be retained and strengthened by increasing, gradually, the entrance and graduation requirements, as discussed elsewhere.

The intermediate and elementary normal courses are discussed later under "Proposed courses and standards." The industrial courses are seven in number, including advanced, general manual training, and household arts courses of six years above eighth grade preparing for junior university standing, and several other intermediate and elementary courses of a commercial and trade-course nature. There is finally a school of agriculture, of 20 weeks' duration.

It is accordingly recommended by the committee that all the industrial courses be discontinued after the present war emergency has passed, and the equipment and facilities be utilized wholly for the industrial phases of the normal-school courses.

Organization of study courses at Spearfish.—This normal school maintains well-adapted advanced, intermediate, and elementary normal courses, as well as a three-year commercial course, and agriculture and industrial short courses of three years of 18 weeks each and a two-year vocational course for dressmakers and milliners.

It is unquestionably eagerness to serve their constituencies and a fear that people may otherwise go untaught that have tempted this and other normal schools to reach out and do work which does not legitimately belong in teacher-training schools. The committee believes that the vocational courses enumerated above have no legitimate place in a State normal school. It should be understood, however, that it is not the committee's intention to eliminate commercial, agricultural, and other industrial and vocational subjects from this or any other normal school, but rather to redirect the purpose of these subjects. Every normal school in the State should require a certain amount of instruction in bookkeeping, in farm accounting, in agriculture, etc., but the purpose should be to provide the State with better teachers rather than with expert accountants and professional milliners and agriculturists.

For this reason the committee recommends that all courses in the school not planned for teachers be discontinued.

Organization of study courses at Madison and Springfield.—These schools adhere quite closely to the courses of study outlined to meet the certification law of 1911. In addition to the professional two, four, and six year courses described above, Madison offers a two-year primary and kindergarten course for high-school graduates or the equivalent. The school is well equipped to do this work. Madison also offers a two-year course for rural teachers, open to eighth-year graduates. This course is too brief to prepare the right type of rural teacher. Furthermore, it is a course on paper only, as the school has not yet employed the necessary rural expert to have charge of the course, and no students are enrolled. The rural course should be reorganized and strengthened in accordance with the recommendations given later in this chapter.

Springfield offers, in addition to the regular elementary, intermediate, and advanced courses, a business course and special music instruction. The business course as advertised "gives to those who wish to engage in business pursuits an opportunity to fit themselves in a practical manner," etc. This goes clearly beyond the province of a normal school. The course should be discontinued, and the commercial subjects adapted to the needs of the regular professional

students. All students should have an opportunity to include much public-school music in their courses and even to take private lessons; but the committee is inclined to think that private instruction is carried to an extreme in this school and urges that the tendency be curbed.

During the year several hundred teachers came to the State who had received their preparation in other States. However, these are offset by an almost equally large number of teachers leaving this State to teach in other States. To say, then, that 1,500 teaching recruits go into the schools annually with little or no professional preparation is probably not overstating the case, although final data are not available.

The State needs annually about 150 high-school teachers. A very small number were supplied by the university and the State college. The denominational colleges supplied a larger number, most of whom had had little or no real practice teaching. This educational field is not fully occupied. The normal schools send a fair per cent of their graduates into rural schools; the rest go into village and town schools and the nonaccredited high schools. But the numbers are wholly inadequate.

The best interests of the State seem to demand that—

(*a*) The facilities for preparing teachers in the normal schools be greatly enlarged; that to this end one normal school devote its energies chiefly to preparing rural teachers, and three schools to rural and other elementary teachers and subject supervisors.

(*b*) The best high schools in the State be authorized to prepare elementary teachers (see Chapter XIX) to provide elementary schools with the required number of teachers.

Proposed standards for the normal school.—When the nonprofessional courses are eliminated the normal schools can concentrate all their efforts on improving the regular normal-school courses. The professionalization of the teaching staff must ultimately be decided by, or at least through, the normal schools. The way to procure a permanent staff of good teachers is, paradoxical as it may seem, to increase entrance requirements and lengthen courses of study. For a person who invests a good measure of time and money in his professional education will be loath to abandon his own calling for other callings, as is such a temptation to people who have made no real sacrifice in preparation for this life work.

The committee proposes at this juncture to restate and lay down for the guidance of South Dakota a few of the standards that have been formulated by the United States Bureau of Education and set down as reasonable guides for other States:

1. The State should require certain definite academic and professional attainments of all teachers.

2. The entrance requirements of the State normal schools should gradually be raised to graduation from a four-year accredited high-school course.

3. The lowest grade of certificate to be issued by the normal schools after 1924 should represent two years above high-school graduation. After 1925 the normal-school diploma should be given only to those who have finished satisfactorily a full course of three years.

4. The ultimate standard of attainment for all persons teaching in the State should be graduation from an accredited four-year high school and at least two years of professional preparation.

5. The process of elimination should be gradual, to permit teachers in service to meet the new requirements without undue hardship.

6. The normal schools should organize thoroughgoing extension courses for the teachers in service.

7. The normal schools of this agricultural State should recognize a special obligation to provide appropriately trained teachers for rural communities.

8. The normal schools should offer differentiated courses of study representing two and three years above high-school graduation.

9. The principal function of the normal schools should be the preparation of elementary teachers for the rural and other elementary schools, while the principal function of the departments of education in the university and the colleges should be the preparation of high-school teachers.

Recommendations for securing these standards.—To secure the establishment of the first six of these standards the committee recommends:

(*a*) That, beginning with the fall term of the school year 1920–21, the first year of all the courses (being the ninth year in the public-school course) as now given be discontinued, and that for that year the minimum requirement for admission to any regular course of the normal schools be made the completion of one full year of the course of an accredited high school or its equivalent.

(*b*) That, beginning with the fall term of the school year 1921–22, the second year of all the courses of study as now given be discontinued, and that each year thereafter an additional year shall be discontinued until by the fall term of the school year 1924–25 only graduates from fully accredited high schools, or the equivalent, be admitted to the regular courses in the State normal schools.

(*c*) That when the new entrance requirements begin to be realized the State normal schools may organize prenormal-school departments of an academic nature for students from sections of the State without good high-school facilities, provided that these prenormal-school departments be abandoned as soon as high-school distribution shall have become ample.

(*d*) That after the close of the spring session of 1924 all normal-school certificates or credentials given for the completion of courses representing less than two years of study after the completion of a high-school course of four years be discontinued.

(*e*) That after the close of the spring term of 1925 the two-year course normal-school diploma be awarded for the completion of a two-year full course above high-school graduation, and that the advanced normal-school diploma be awarded for completion of three-year courses above high-school graduation only.

(*f*) That, since there are in the service of the rural and other elementary schools of the State many teachers of less academic and professional preparation than will be required by the higher standards in use after 1925, special provision be made at the summer sessions of the normal schools for these teachers, and that such irregular courses be offered as may be necessary to meet their needs.

(*g*) That all such teachers be required to attend the summer session of some normal school, university, or accredited college to attain the new standards; or, in lieu thereof, to meet these standards through study at the study centers organized for this purpose (see next paragraph below).

Training of teachers in service.—The responsibility of the normal schools does not stop with the graduation of their teachers-in-training. If teaching is to be a definite profession, the teacher-in-service must continue to receive professional direction from the normal schools. To this end each of the four South Dakota normal schools should organize an extension service, each operating within its own normal-school extension district, the boundaries of which may be determined by the State board of regents or by the administrative heads of the four schools. The purpose of this extension service should be twofold: (1) To assist all teachers now in service to attain the gradually increasing requirements under the new standards. (2) To provide advanced work for normal-school graduates now in service.

It would be unfair for the State to require the higher certification standards proposed above and not to offer the means by which these requirements could be attained without temporarily abandoning the teaching field. Some of the teachers in the service of the State are mature instructors with families and others depending on them for support, which would prohibit actual school attendance on their part. To reach this large group of teachers is the primary purpose in recommending an extension service in the normal schools. The committee feels that this extension work can be made an important part of the normal-school service to the State. A director of extension should be appointed for each school with a sufficient number of assistants to establish week-end study centers within convenient reach of the teachers.

A similar extension service has recently been recommended by the Bureau of Education in its surveys of the educational systems of Washington, North Dakota, and Arizona. The details of the service must be conducted in the manner best suited to the needs of each

extension district and the State. The committee believe that a modified form of the so-called "Iowa plan" organized by the Iowa State Teachers' College for that State, would meet the South Dakota requirements.

Advanced work for graduates.—Graduates from the professional courses of the several State normal schools receive a normal-school diploma granted for life, which entitles the holder to teach without examination in any public school in South Dakota. Unfortunately, graduation from a normal school, however good, is no guarantee that the students will make successful teachers. Certain European countries never grant permanent certificates until the candidate has served a successful apprenticeship of two or more years, during which much time must be devoted to professional reading under Government direction. The committee believes that the professional standards of all teachers would be greatly improved if provisional licenses only were granted on the basis of normal-school diplomas, but that these licenses should be converted into life certificates after the graduates shall have proved both their ability to teach and their willingness and ability to carry forward cultural and professional study without the constant oversight of teachers and other school helps. To this end the committee recommends an extension service for normal-school graduates much like the service proposed by the Bureau of Education in its educational surveys of Washington, North Dakota, and Arizona, namely:

(1) That for all graduates of the normal schools who hold diplomas valid as certificates to teach in the State the State department of public instruction shall, with the assistance of the presidents of the normal schools and the heads of the departments of education in the university, prepare thoroughgoing courses of study, including both professional and cultural subjects, which may be completed within a period of three years from the time of beginning study; that examinations on portions of these courses be held from time to time; and that no person receive a permanent license to teach in the public schools of the State until after he has passed a final examination in all courses prescribed; the final examination should be passed not earlier than two nor later than five years after the time of leaving the normal school.

(2) That State, county, and city superintendents and supervisors be required to give special attention to young teachers who are pursuing these prescribed courses of study and have not yet received a permanent license to teach. Before granting the permanent license to any teacher the State department of public instruction should require a statement that such teacher has passed a satisfactory examination on the prescribed course of study, and also a specific report from a qualified superintendent, supervisor, or inspector that this

teacher has taught satisfactorily not less than 16 months in the schools of the State. And this report should be accompanied by detailed records of the work done within the past eight months, showing its excellence and defects.

(3) That the same policy in regard to permanent licenses to teach in the elementary schools of the State be pursued with teachers entering the service from other States. The first license granted to any such teacher should be a temporary license.

Specialized departments in which to prepare rural teachers.—The State requires about five rural teachers for each one needed in the towns and cities. The educational needs of the rural-school teachers have already been alluded to elsewhere, but the subject is important enough to warrant special discussion.

The tragic mistake has been to assume that rural teachers can get along with less preparation than is needed elsewhere. Consequently, inexperienced, immature, and half-taught persons have been pushed out into rural districts to teach, with the result that rural schools in many places do not provide the kind of education required by its patrons. It is not sufficient, therefore, that teachers in rural schools should have as much general education and professional skill as teachers in the elementary grades in town schools. In addition they need a wider range of knowledge in many subjects not necessary for the elementary teachers in town schools. Rural teachers must understand the underlying problems of country life and must have correct vision and point of view and zeal to undertake the trying tasks of modern rural teaching. This calls for many-sided specialized preparation which can not be acquired in the general pedagogical courses. Specialized departments in charge of rural life experts are necessary if the schools would solve this important problem. The courses offered must be practical and contain all the sciences that pertain to rural life; moreover, the courses must be made at least as long in time as the advanced courses preparing for teaching in town. Land and laboratories are needed in which to apply the course of study. There should also be a rural practice school of the consolidated type established in connection with each normal school, and other near-by rural schools might profitably be organized for rural observation purposes.

Teaching staff and class organization.—The following summary (Table 93) giving (1) the number of regular instructors, (2) salaries for the regular school year of three terms, (3) the average number of different subjects taught, (4) the average number of class periods per week for each instructor, (5) the average number of students per hours, and (6) the average number of student clock hours per week, furnishes an exact basis for a comparative study of the four State normal schools:

TABLE 96.—*Number, salary, and class work of the instructors of normal schools of South Dakota.*

Normal schools.	Number of regular instructors.	Average salary for regular school year.	Average number of subjects taught.	Average number of recitations per week.	Average number of students per class.	Average student clock hours per week.	Critic teacher and others not classed as regular.	Average salary of those not classed as regular instructors.
Aberdeen	33	$1,383.58	3+	18	27	410	2	$410
Madison	15	1,456.67	3+	14	35	466	14	374
Spearfish	23	1,293.50	3+	24	31	601	12	880
Springfield	14	1,121.43	3+	16	17	271	7	321
Average	21	1,313.77	3+	18	28	437	9	496

The table should be studied in the light of the following standards for normal schools now generally accepted by students of education who have given serious study to the internal administration of this class of schools:

(1) The average salary of regular instructors should approach $2,000 per annum; the salary of practice school-teachers should approach $1,800.

(2) The number of classroom clock hours per instructor should not exceed 20 per week.

(3) The number of students per class should not exceed 30 or 35, except in lecture work.

(4) The average number of student clock hours carried by an instructor may reach 300 and 400, the reasonable load in any case being determined by the kind of work required.

The summary distinguishes between regular normal school instructors and critic teachers, assistants, part-time teachers, etc. Aberdeen has the largest number of regular instructors, and Springfield the smallest. The salaries average very low throughout and should be scaled up to the standards laid down in the preceding paragraph. The average number of subjects is about what it ought to be, as the schools are organized on a reasonably definite departmental basis.

The number of recitations per instructor average only 18 per week, which is less than the standard load. Spearfish alone averages above the standard. The same may be said about the average number of students per class. None can be considered too large, and Springfield carries classes that are unusually small. The average number of student clock hours is too high at Spearfish, because the instructors carry more than the standard requirement of recitations. Springfield is not running at full capacity; the other two schools carry about the correct load of student clock hours, although the figures are somewhat high, due to the large number of physical culture and music students included in the tables.

From the above it appears:

(1) That the normal school staffs are greatly underpaid.

(2) That staff members can not be said to be overloaded with work; indeed, the standards being about right with the exception of Springfield, which operates at about two-thirds capacity, due to the small number of students in attendance.

Section 3. MAINTENANCE, PHYSICAL EQUIPMENT, AND PRESENT NEEDS OF THE SOUTH DAKOTA NORMAL SCHOOLS.

(A) THE NORTHERN NORMAL AND INDUSTRIAL SCHOOL.

Physical equipment.—The general equipment of this school is adequate for good instruction. The grounds comprise 25 acres, situated on the outskirts of Aberdeen, platted to lawns, shrubbery, agricultural experiment plats, playgrounds, etc. Six buildings are used for school purposes, two being dormitories, devoted entirely to the use of young women. The central building contains laboratories, classrooms, and the library collections. The administration building, as signified in the name, contains the executive offices, and in addition the auditorium, post office, book store, home economics, kitchen and serving rooms, and recitation rooms. The manual arts building contains the school's well-equipped wood and metal shops, tool and stock room, forge shop, foundry, drafting room, gymnasium, and other rooms and equipment. This building is exceptionally well adapted for advanced industrial work, as well as for the type of manual training required in the public schools. The central heating plant is well equipped with high-pressure boilers, which are ample for all purposes. This school has no practice school equipment on the premises, as all practice teaching is done in the Aberdeen public schools.

Additional equipment needed.—This school has unquestionably received more liberal appropriations than any other normal school in the State, although it has not had any too much. A liberal treatment of all the normal schools is the best policy for the legislature to follow. These schools must be assisted in every way to expand and attract more students. The Northern Normal and Industrial School should have certain definite equipment for future enlargement. This includes:

(1) A new auditorium and gymnasium.

(2) Remodeling the old dormitory for women.

(3) A rural practice school.

(4) Increased library facilities, equipment, and books.

Plans should be made for one substantial building to be used as auditorium and gymnasium. The present assembly hall should be converted into library quarters, and the present library transferred

from the central building where the present quarters are needed for classrooms. The gymnasium is too small and poorly located for present needs. The space now occupied by the gymnasium could be used to good advantage by the industrial classes. For the new building $200,000 would be needed.

The woman's building could be remodeled and modernized at an outlay of about $10,000.

The most urgent need of the school is, however, rural practice school facilities. Since the biggest present task of the normal schools is to supply many well-prepared rural teachers, each of the four schools should be provided with good practice school plants of the consolidated type. Aberdeen should acquire the triangular tract of 15 acres adjacent to the athletic field. Here should be erected a model two-room school, with full basement, and a model teachers' cottage, both structures complying with the suggestions for ideal school plants discussed elsewhere in the report. It would be highly desirable for the school to enter into a cooperative agreement with the Aberdeen township board to consolidate its three one-room schools at the proposed model school.

(B) THE STATE NORMAL SCHOOL AT MADISON.

Physical equipment.—The school is hampered for lack of ample financial support and up-to-date equipment. The school boasts an excellent training-school building, a good gymnasium, and an adequate heating plant. The rest of the plant and equipment is wholly inadequate. Aside from the buildings mentioned above, the school utilizes the so-called east wing and west wing for recitation rooms, laboratories, library, auditorium, and administration purposes. Another building is used as dormitory for young women.

The library collection is small (4,000 volumes) and poorly housed. A definite annual appropriation of not less than $750 is necessary to get the collection brought up to date. This school has no equipment for manual training and shopwork, if one leaves out of consideration one poorly equipped cellar room not worth mentioning. The auditorium is small and difficult of access. The exit is badly planned and dangerous.

Additional equipment and teaching staff needed at Madison.—(1) The plan of the school authorities has been from the first to connect the east and west wings by a central main building. This is an excellent idea for a State like South Dakota, with its severe winter weather. The committee recommends that a large central building be erected at a cost of about $200,000, between the present wings and connected to them by fireproof protected passageways. The new building should be fireproof throughout, and should be planned to house the administration offices, the library, a number of recitation

rooms, and the auditorium. This readjustment would allow ample space for industrial work in one of the present wings.

(2) This school should devote all its energies to preparing elementary-school teachers, including rural teachers, since it lies in the heart of a great agricultural section. To this end the normal school must establish a practical rural practice school. A school plant is recommended, identical with that recommended for Aberdeen. The normal-school campus contains 20 acres. It is urged that 20 acres lying near by (which the committee understands can be procured now at a reasonable price) be purchased and used for rural school plant and agricultural experimentation.

(3) The following staff members should be added without further delay: An expert to organize the rural school department, a manual-training director, one assistant in home economics, one instructor in public-school music, one critic teacher, and one additional janitor.

(c) THE STATE NORMAL SCHOOL AT SPEARFISH.

Physical equipment.—The school plant is composed of four large buildings and a central heating plant set in 80 acres of land used for grounds and school farm. This school is fortunate in having its own school farm of 70 acres. This is sure to play an important part in the future rural teacher training at the school. The main building is large and well equipped. The laboratories and classroom equipment are very satisfactory. The library is the most complete (19,000 volumes) in any of the normal schools. The Wenona Cook Hall, or Young Women's Hall, while on the whole well planned, should be supplied with fire escapes without delay. The training-school building is a satisfactory structure.

The gymnasium and auditorium (under construction) as planned is a splendid structure; but, unfortunately, the present appropriation is insufficient to complete it. The exterior aspect of the building, at least, will be unattractive until the whole is completed according to the original plans.

Needed improvements.—The following improvements are recommended by the committee as essential:

(1) An additional appropriation of $60,000 to complete the gymnasium building according to original plans and specifications.

(2) A rural practice school of the consolidated type, to be erected at a cost of $7,500, and a home for its teachers to cost $3,500.

(3) An appropriation of $10,000 to complete platting and planting the school grounds, which have received little attention in the past.

(4) An appropriation sufficient to install new steam boiler to adequately heat the school buildings.

(D) THE STATE NORMAL SCHOOL AT SPRINGFIELD.

Physical equipment.—The grounds of this normal school comprise 20 acres of land on an elevation overlooking the town and the Missouri Valley. The school has just procured, through purchase, an additional tract of land suitable for rural practice grounds.

The present plant includes a substantial main building (the central section and one wing only completed), a young women's dormitory, a new building used for science classrooms and gymnasium, and a central heating plant.

Needed additions and improvements.—The committee recommends the following additions and improvements for the school at Springfield:

(1) Erection of wing to complete the main building.

(2) Construction of a second building to be used as dormitory and dining hall.

(3) Construction of a complete rural practice school.

The regents should dedicate this normal school to the special function of preparing rural teachers. This calls for much land for experimentation and good laboratory equipment. It requires also good school "home" for the teachers in charge.

The main building can be completed at an outlay of $50,000; $10,000 additional required for remodeling the rest of the building. At the present time the school is obliged to house its home economics department and art department in the subbasement of the old building. This is bad.

The dormitory is overcrowded, 91 girls residing in a building planned for 80. Such a new building can probably be erected for $50,000.

Finally, $7,500 should be appropriated for a two-room consolidated rural practice school and $3,500 for a teachers' cottage and community house, both of which should be erected on the 18 acres of land described above.

SUMMARY OF RECOMMENDATIONS RELATING TO THE STATE NORMAL SCHOOLS.

1. The enlargement of the facilities for preparing teachers in the normal schools. That to this end—

(*a*) The normal school at Springfield devote its energies chiefly to preparing rural teachers.

(*b*) The normal schools at Madison and Spearfish devote their energies chiefly to preparing rural and other elementary teachers and special-subject supervisors.

(c) The Northern Normal and Industrial School at Aberdeen devote its energies to preparing rural and other elementary teachers and supervisors, including supervisors of industrial subjects.

2. The gradual increase of entrance requirements to graduation from an accredited four-year high school.

3. The granting of no normal-school certificates after the spring session of 1924 for less than the completion of two years of normal-school work above high-school graduation.

4. The award after the spring session of 1925 of a two-year course normal-school diploma for the completion of the two-year course above high-school graduation, and of the advanced normal-school diploma for completion of three years above high-school graduation.

5. The provision by the normal schools for differentiated courses of study of two and three years above high-school graduation.

6. The establishment of special summer and irregular courses to enable teachers in service to fulfill the new academic and professional requirements.

7. The division of the State into extension-service districts, one for each normal school, within which each normal school shall organize an extension service for the teachers of the State.

8. The preparation of courses of study for the further training of teachers in service, the satisfactory completion of which shall be necessary to secure a permanent license to teach.

9. The organization of specialized rural school departments in connection with each of the normal schools.

10. Liberal increase in the salaries of all normal-school instructors.

11. More liberal financial support of all the normal schools, to enable them to reach the largest possible number of future teachers.

The commission believes that the preparation of teachers for elementary schools, whether in rural communities or in towns or cities, should be just as thorough as for high schools, and that the ultimate training should include four years of work beyond the high school. How rapidly this standard shall be approached in South Dakota the commission can not foresee. As to how rapidly the courses of study in the normal schools should be lengthened to four years the commission is not prepared to make a recommendation. The constituency of the student body attending the normal schools and the means available for the support of the normal schools are conditioning factors which the regents of education will bear in mind. The foregoing recommendations do not in any way preclude the possibility of enhancing and extending the work of the normal schools beyond the minimum limits here prescribed.

Chapter XIX.

PREPARATION OF PUBLIC SCHOOL TEACHERS—THE UNIVERSITY AND COLLEGES.

Section 1. THE DEPARTMENT OF EDUCATION IN THE UNIVERSITY OF SOUTH DAKOTA.

Purpose of the department.—The purpose of the department of education, as expressed by the university authorities—

is to furnish adequate facilities for the study of the science of education and the art of teaching. It is designed to fit teachers, supervisors, principals, and superintendents for the schools of the State, though its courses are open to anyone interested in the work of education.

At the time of the survey 161 persons who are teaching in the public schools, normal schools, or colleges of the State hold degrees from the University of South Dakota or have taken courses in the university. These teachers may be summarized as follows:

(*a*) Thirty-nine superintendents and principals and fifty-nine teachers who hold degrees or are working for advanced degrees and teaching in high schools, normal schools, or colleges of the State.

(*b*) Twenty-nine superintendents and principals and ten teachers, who are undergraduates of the university, teaching in the high schools of the State of State certificates.

(*b*) Twenty-nine superintendents and principals and ten teachers, schools of the State on State certificates.

Of the 161 teachers 19 are members of normal school, college, and university faculties and 4 have resigned for war duties. This leaves 138 in the public schools, 11 of whom are elementary-school teachers. The net total is 127 superintendents, principals, and high-school teachers employed in the State, or about 15 per cent of the actual number required to supply secondary schools. Furthermore, not all of the 127 teachers have come into the high schools through the department of education of the university, although probably most of them have had some courses in education. From this it can be seen that the university has only barely touched the problem of preparing teachers for secondary schools.

Number and distribution of students enrolled in education.—The number of students taking courses in education the first semester of 1917–18 was 141, distributed as follows: South Dakota, 131; Iowa, 9; Nebraska, 1.

Distribution of South Dakota students in education, by counties.

Beadle	1	Grant	1	Moody	2
Bonhomme	4	Gregory	4	Pennington	1
Brown	3	Hughes	3	Roberts	1
Brule	1	Hutchinson	1	Sanborn	6
Charles Mix	8	Jerauld	1	Shannon	1
Clark	1	Kingsbury	2	Spink	5
Clay	32	Lake	2	Turner	1
Codington	6	Lawrence	2	Union	5
Davison	2	Lincoln	5	Yankton	1
Day	1	McCook	6		
Douglas	4	Marshall	1	Total	131
Edmunds	1	Meade	2		
Faulk	5	Minnehaha	9		

The courses offered by the department of education the first semester of 1917–18 and the number of students enrolled in each were as follows:

	Students.
Course 1. Fundamental conceptions of education	80
Course 3. Principles of education	39
Course 7. Measuring results of teaching	6
Course 9. Theory and practice of teaching in elementary schools	29
Course 11. Theory and practice of teaching in secondary schools	9
Course 17. School administration and supervision	2
Course 25. Teaching processes	18
Course 27. Interest, motivation, and appreciation	7

Of these courses all but 17, 25, and 27 are elementary or introductory. The eight courses were given by a staff of two professors and two assistants, who, in addition, devote much time to extension teaching.

Future policy.—The committee is convinced that the time is opportune to reorganize the present department of education as a school of education in charge of a capable dean and an ample staff of professors and assistants. The school of education should occupy a building of its own, well furnished with laboratory equipment and other facilities required in a modern school of education. In this should be housed also the university practice school of high-school rank. It is essential that the students pursuing educational courses have access to such a well-organized practice school. Now, all students who have had teaching experience are excused from practice teaching; all others acquire some experience in the Vermillion high school. The present system, however, does not give the teachers in

training such adequate or systematic practice experience as they should have.

With its department of education reorganized as here proposed, the university should be able to overcome the drawbacks of poor geographical location and furnish the State with an annually increasing number of administrators, supervisors, and high-school teachers.

Section 2. DEPARTMENT OF EDUCATION IN THE STATE COLLEGE.

Present status.—The department of education in the State college is of recent origin, and is still in the process of organization. The department is organized for the purpose of preparing principals and superintendents for the agricultural and industrial high schools, and teachers of agriculture, home economics, and manual training.

As can best be seen from the list of graduates for 1917 (p. 225) who elected courses in education, the department does not yet occupy the place it should have in supplying teachers of vocational subjects, and administrators and supervisors for the new kind of rural schools proposed in this survey, the organization of which is likely to be hastened by the standards set up under the Smith-Hughes Act.

Policy of expansion.—It is definitely settled that the State college will prepare all the teachers for the secondary schools taking advantage of the agricultural-education provision in the Smith-Hughes Act, and at least some of the teachers in home economics. If the recommendations of the survey committee are adopted, the State college will probably prepare all the latter class teachers.

The atmosphere of the agricultural college and its large equipment make this an ideal place in which to prepare not alone the vocational teachers spoken of above, but also principals of the large consolidated and rural high schools and continuation schools urged by the committee.

At the present time a single professor is employed in this department. It should be the policy of the school to enlarge the department. It should be the policy of the school to enlarge the department as rapidly as is consistent with public demands. The committee recommends that the following organization be consummated immediately:

1. That the department be placed in charge of a professor of education and director of the department (who shall conduct the courses in educational theory and practice).

2. That there be appointed to assist him (*a*) one specialist of agricultural education; (*b*) one specialist of home economics education; and (*c*) one specialist of rural education.

Section 3. EDUCATIONAL COURSES IN ACCREDITED COLLEGES AND ACADEMIES.

Legislative provisions.—Under the provisions of sections 13 and 14 of the school laws of South Dakota the State department of public instruction has approved the work of certain denominational schools in the State and has placed these schools on equal terms with the State schools in the matter of receiving State certificates.

Section 13, on life diplomas, provides that—

> a life diploma from the State university or from any approved college having a regular course of study, in which at least four years above an approved high-school course are required, may be accepted in lieu of an examination in the subjects named, if the applicant has in his college course pursued a course of pedagogical studies and pedagogical professional training, comprising at least one-fourth work during at least 18 months.

Under this section the following institutions have been placed on the accredited list: Augustana College, Dakota Wesleyan University, Huron College, Sioux Falls College, Yankton College.

These schools are also accredited under section 14, providing for the issue of State certificates.

Section 14 of the school law provides that—

> a diploma from any State normal school in South Dakota, having a course in which at least two years' work above an approved four-year high-school course is required, may be accepted in lieu of an examination in the subjects named: *Provided further*, That a diploma from any other school having a course of study equivalent in extent and similar in character may be accepted in lieu of an examination in the subjects named.
>
> *Provided further*, That applicants for State certificate, upon normal or other school credentials, must show that the course of study pursued therein contained a course of at least 18 months of pedagogy and professional training, comprising at least one-fourth said time.

Under this section the following institutions have been accredited, in addition to the five enumerated above: Lutheran normal and Wessington Springs junior college.

In addition to the courses for State certificates, these two schools offer courses leading to first and second grade certificates. Notre Dame Academy and Ward Academy likewise offer courses leading to first and second grade certificates.

Annual teacher accessions from the accredited colleges.—Table 97 shows that 47 students in the accredited colleges completed the required pedagogical and professional courses entitling them to life diplomas; 37 others completed the six-year course for the five-year State certificate. In all, 192 students completed one or another of the four-certificate courses. Of these, 144 are teaching the present year.

ABLE 97.—*Graduates in education from accredited denominational colleges and academies, 1917.*

Institutions.	Life diploma.	State certificate.	First-grade certificate.	Second-grade certificate.	Total number teaching in 1917-18.
ugustana College			13	10	17
akota Wesleyan University	19	12			22
uron College	15	6			15
oux Falls College	2	4			1
ankton College	11	11			17
utheran Normal School		3	9	26	28
'essington Springs Junior College		1	11	15	24
'ard Academy			10	14	20
Total	47	37	43	65	144

It is evident from these data that the denominational schools are aking an important part in the preparation of teachers for the chools of the State, which ought to be encouraged in every possible vay by the State authorities.

Policy of inspecting and re-accrediting the denominational schools.—It is vitally important that the State authorities which have placed these schools on the accredited lists should also exercise the authority of inspection over them, so far as their facilities for teacher training are concerned. The committee believes that former State superintendents have been too ready to grant the right of accrediting, and that as a result several schools enjoy this important function which are not adequately equipped for the work. It is not the purpose to go into details of all the weaknesses discovered. Attention is, however, called to the following facts:

1. Augustana College is only a junior college and should no longer be accredited for life diploma under the four-year college course.

2. Dakota Wesleyan University, Huron College, and Yankton College rank in a class by themselves, and are the only colleges fitted, by reason of teaching staff, laboratory and library equipment, etc., to grant the life diploma on equal terms with the State schools.

3. The colleges now accredited to offer courses leading to life diplomas and State certificates do not have the equipment (practice school, etc.) to instruct elementary school teachers which most of the six-year course teachers become.

4. The equipment of the schools that limit their courses to the State certificate and the first and second grade certificates, or first and second grade certificates only, is generally too meager. This refers particularly to training-school facilities and professional libraries.

5. The accredited schools that offer courses for certificates similar to the courses given in the normal schools should gradually raise their entrance requirements and lengthen their courses to comply with the standards set for the normal schools (see page 237).

Section 4. PROPOSED TEACHER-TRAINING DEPARTMENTS IN HIGH SCHOOLS.

In a total of 9,250 students enrolled in the South Dakota high schools, only 280 students study teaching subjects. Despite this fact more than 25 per cent of these students teach without further preparation. This is a bad practice. The high schools have a real opportunity to stimulate a better professional attitude among the young people, with the ultimate result of hastening the raising of standards and building up the attendance at the normal schools.

What schools should offer training courses.—The committee believes that only a limited number of fully accredited high schools should be authorized to offer teacher-training courses. As a beginning the privilege might be limited to the 19 high schools in Group 1 (see page 187). However, the ultimate aim should be to establish one such school in each organized county. Teaching staffs, courses of study, and equipment of these schools should be approved by the State department of public instruction and should receive State aid for their training departments. The work should be organized as a fifth or graduate year, and it should be understood that this is only a temporary expedient. As soon as possible the normal schools should be so enlarged as to enable them to prepare a sufficient number of teachers for all elementary schools.

The committee accordingly makes the following specific recommendations:

1. That the State legislature appropriate $40,000 for the biennium 1919-21 to aid in establishing and maintaining teacher-training departments organized as fifth-year courses in connection with four-year high schools approved by the State department of public instruction.
2. That no school shall receive more than $1,000 per annum.

The following course is planned for fifth-year study in high schools organizing teacher-training departments:

FIRST TERM. 12 hours.

	Total hours per week
Practical introductions to teaching	4
A simple course embodying such principles of education and of teaching as will aid the teacher-in-training to orient himself and get a grasp of the fundamental principles which should precede observation and practice teaching and special methods and rural school management. The course is necessarily elementary; little attempt is made to stress the physical facts underlying the principles of teaching.	
English	4
A course in English language, including grammar, oral and written composition, and spelling. The presupposition is that the students have already acquired a reasonable good English equipment in their high-school course. The present course is intended to intensify the work done in high school, and particularly to emphasize the special phases of English that should be taught in elementary rural schools—how best to teach composition; how much, when, and where to teach grammar; and how to teach and how much to include of spelling.	

Total hours per week.

ature study-agriculture ---------- 4

A course intended as an approach to the central subject in every rural curriculum, i. e., agriculture, from the educational and spiritual, rather than the occupational, point of view. The first term is devoted largely to the general environment in which rural children live, and to a study of plants, birds, insects, etc., with practical methods of presentation, for the purpose of placing children in harmony with the nature environment where they live, to the end that they may learn to love and honor the land.

Rural health and sanitation ---------- 2

A comprehensive course, including personal hygiene, school sanitation, and home and community sanitation. It emphasizes the teacher's own health and the influence of the pupil's health on study and school progress. Much time is devoted to the principles of school sanitation, including ventilation, heating, lighting, communicable diseases, etc. About one-fourth of the time is given to farm-home sanitation and sanitary living, with emphasis on water supply, sewage disposal, air, food, and clothing.

Observation and practice teaching ---------- 4

Local elementary and near-by rural schools to be used as laboratory, as prerequisites for best results in this course. Fully two-thirds of the time of this term is devoted to observation of class procedure and management, technique, and drill lessons. Some time is devoted to a study of general rural school conditions. No actual practice teaching is done during this term unless the class is too large to permit all required teaching to be completed by the students during the second and third terms.

Physical education ---------- 2

A course devoted to the significance of physical training, corrective exercises, etc.

20

SECOND TERM. 12 weeks.

Rural school management and methods of teaching ---------- 4

A course devoted to the problems of rural school organization, classroom procedure, daily program, and class technique. The study accompanies practice teaching, which begins the second term, from which it derives its meaning, as the discussions in class usuallly grow out of the daily experiences gained in observation and practice teaching.

Arithmetic and farm accounts ---------- 3

A careful study of the fundamental principles of arithmetic, and special emphasis on application of these principles to the content matter available in every rural environment. Considerable time is devoted to simple farm accounts.

Reading and phonics ---------- 3

A course designed to give the student a comprehensive view of the aims and purposes of teaching reading. Much time is given to *how* to teach the subject, what the different groups should read, and how to correlate reading to other subjects in the program.

School music ---------- 2

This course is intended to prepare teachers to give music as a regular class exercise in the rural schools. Much time is devoted to sight reading and part singing. The aim is largely to develop the power to read the printed score and appreciate choice music.

Art ---------- 2

Includes such phases of art as can be profitably undertaken in rural schools. It aims to develop appreciation of good pictures, understanding and love of the beautiful in nature, and outlines ways for improving and beautifying the farm home.

Total hours per week.

Industrial arts 2

A course planned to help students prepare for such phases of industrial arts as should properly cover the first five years of the rural school course. The subject matter is planned to center about the activities of home and community, these activities are imitated in projects made by paper, cardboard, clay, and other materials which are easily manipulated.

Observation and practice teaching 4

This course is devoted to class teaching in the rural or other elementary practice schools. The work centers about language, reading, spelling, and arithmetic. Conferences with critic teachers of the practice schools.

20

THIRD TERM. 12 weeks.

Rural-life problems 4

A thorough-going course in the fundamental characteristics of rural life; a history of its changes from pioneering to modern agriculture; a statement of its primary institutions and agencies, with special emphasis on the home, church, and school; place of the rural school in community leadership; modern school organization, administration, and supervision; farm community schools, continuation schools, extension courses, etc.

History and community civics 4

A course designed especially to teach the methods of these subjects. It supplements what has already been learned, and gives especially the phases of history and community civics which should be emphasized in rural schools. The course in civics stresses rural health and morals, responsibility in keeping rural communities wholesome and healthful; in protecting them from social vice, etc.

Nature study—agriculture 4

The course continues the work begun with the fall term. It emphasizes agriculture teaching in the laboratory of nature. The textbook is considered in the light of leading thread only. All students are expected to work in the school experiment plats, and should grow individual gardens. School and home gardens, school and home projects, and club work receive much attention.

Home economics (girls) 2

A course which emphasizes sewing, cooking as approached through the medium of the hot lunch, and similar phases of home economics which are practicable in the small rural school.

Manual training (boys) 2

This is a study of such manual activities as every farm boy should be acquainted with. It discourages the old limitation of keeping the boy at work at a few highly finished or elaborated articles, and emphasizes instead all the commonly practiced manual activities essential to successful agricultural life, which include work in wood, leather, metal, and cement.

Observation and practice teaching 4

The course for this term continues the practice teaching by classes and subjects begun with the second term. Geography, history, music, art, and industrial work receive considerable attention. The last half of the term is devoted to room teaching; i. e., the practice teacher takes entire charge of the room. Conferences with critic teachers continued.

20

Physical education 2

Devoted chiefly to supervised play and games. No preparation required.

This course may be organized for three terms with 60 term-hour credits or for two semesters with 40 semester-hour credits.

SUMMARY OF RECOMMENDATIONS ON TEACHER-PREPARATION IN THE UNIVERSITY AND COLLEGES AND SPECIAL HIGH SCHOOLS.

1. The reorganization of the department of education in the University of South Dakota as a school of education in charge of a dean and faculty of education.

2. The organization of a practice high school in connection with the university department of education.

3. The enlargement of the department of education in the State College of Agriculture to meet the new demands made on it under the Smith-Hughes Act.

4. The systematic inspection of the accredited denominational colleges and academies by the State department of public instruction.

5. The readjustment of certification privileges of the denominational schools on the following basis:

a. That Huron College, the Dakota Wesleyan University, and Yankton College alone retain the acquired right to offer life diplomas for the completion of the four-year college course; that these schools abandon the six-year courses by reason of lack of adequate practice school facilities.

b. That all the other colleges and academies offering courses leading to State certificates and to first and second grade certificates improve their practice-school facilities and enlarge their professional libraries under the direction of the State department of public instruction in order to retain the certification privilege they now hold.

6. The establishment of training departments for elementary teachers in certain accredited high schools.

Chapter XX.

HIGHER EDUCATION.[1]

South Dakota is one of the comparatively few States of the Union that divide support for higher education among three or more institutions. Twenty-five of the States provide whatever higher education is afforded in one institution, with centralized administration and under a single board of control. Ten States maintain two separate institutions, and 13 States maintain three or four higher institutions in different localities, with separate administration and for the most part under separate boards of control. Only five States besides South Dakota (Colorado, Michigan, Montana, New Mexico and Oklahoma) maintain separate schools of mines.

Experience and theory apparently justify two principles for the organization of higher education: (*a*) That, whenever possible, all higher education, other than that of the normal schools, should be consolidated in a single State university; (*b*) that, whenever two or more higher institutions are established definite fields should be assigned to the different institutions, and great care should be taken to so coordinate the work of the institutions as to prevent wasteful duplication of courses or departments.

Section 1. THE CONSOLIDATION OF HIGHER EDUCATION IN SOUTH DAKOTA.

In the judgment of the survey committee a serious error was made when the State of South Dakota established the present three institutions for higher education. The committee believes that the educational and material interests of the State would be served best if a single institution were maintained, that institution comprehending all forms of higher education now provided in the State university, the State college, and the State school of mines. Beyond question this would have been the best policy in the beginning, and the committee is convinced that even now it would be far better to consolidate all three of its degree-granting institutions, abandon the present plants, and establish a new State university centrally located and accessible from all parts of the State. The survey committee accord-

[1] The present statement on higher education is condensed from the report of the survey committee, which was too lengthy and detailed to be included herewith. The full report will probably be printed later as a bulletin of the Bureau of Education.

ingly recommends the establishment of a consolidated University of South Dakota. It makes this recommendation for the following reasons:

(1) The total number of collegiate students in the State of South Dakota is relatively small—so small that its division into three groups in the three institutions renders impossible effective and, at the same time, reasonably economical instruction. At the present time the total number of collegiate students resident in the State of South Dakota is much below 2,000, while the number attending public institutions in the State is less than 1,000. A single university could well provide for five or six times this number if the population should increase accordingly.

(2) The expense of maintaining a single consolidated university would be far less than the expense of maintaining the three existing institutions. In less than a decade the State could probably recover all the loss incident to the abandonment of existing plants, even if no other use were found for them.

(3) One of the greatest disadvantages of maintaining two or more institutions for higher education is the apparently inevitable rise of interinstitutional competition with its consequent duplication of work, wasteful expenditure of public money, sectional politics, and constant interference with the proper development of educational facilities. The State of South Dakota has been more fortunate than most States in escaping the sectional discord, political logrolling, educational discouragement, and interinstitutional difficulties which have appeared to be inextricably related to the maintenance of more than one higher institution in other States. It has not, however, entirely escaped interinstitutional competition, a certain amount of institutional politics, and a considerable amount of educational duplication with its consequent educational loss and financial waste. South Dakota has already paid a heavy bill for its educational duplication and has already failed to develop that degree of educational achievement which the committee believes would follow from the consolidation of its higher institutions. As time goes on the financial loss will be heavier and the educational loss will be irretrievable.

In any circumstance the committee recommends the abandonment of the State school of mines. It recommends also that the State seize on the favorable opportunity to reorganize its entire system of collegiate education by the establishment of a consolidated State university.

The establishment of junior colleges.—One of the strongest arguments for the maintenance of more than one higher institution is the

fact that interest in higher education and attendance at hi[illegible] institutions are greatly affected by the proximity and accessib[illegible] of such institutions. In making the above recommendation fo[illegible] consolidated State university the survey committee had in mi[illegible] further recommendation designed to meet the desirability of ins[illegible]tutions located so as to develop a State-wide interest in higher e[illegible]cation and to foster attendance at higher institutions. Within t[illegible] past decade several States have encouraged the establishmen[illegible] institutions which cover the work of the freshman and sopho[illegible] years of a collegiate course. To such institutions has been gi[illegible] the name of junior colleges. In most colleges and universities t[illegible] major part of the work of the freshman and sophomore year[illegible] limited to elementary courses and courses which are foundat[illegible] for the somewhat more specialized work of the junior and se[illegible] years. This work is comparatively inexpensive and the relativ[illegible] large numbers of students enrolled in the courses does not ca[illegible] wasteful duplication. It may well be provided in several insti[illegible]tions without educational or financial loss. On the other hand, t[illegible] major part of the work of the junior and senior years in a colle[illegible] or university is somewhat specialized and therefore expensive unl[illegible] consolidated in one institution.

The committee recommends for the serious consideration of the e[illegible]cational authorities of the State of South Dakota the establishmen[illegible] of three junior colleges affiliated with the consolidated State univer[illegible]sity and providing each a two-years' course of study coordinated with the junior year of the university. For one of these junior c[illegible]leges provision might well be made in the western part of the Sta[illegible] to take the place of much of the work now done by the general cou[illegible] at the State school of mines and possibly occupying the plant to b[illegible] vacated by that institution. The location of the other two (or more institutions would have to be determined with reference to the loca[illegible]tion of the State university. If that institution be located in th[illegible] central part of the State, one of the junior colleges might well b[illegible] located in the southeastern part of the State, possibly occupying th[illegible] plant of the present State university, and one in the northeastern part of the State. Under no conditions should any of these junio[illegible] colleges be affiliated with any of the State normal schools. They should be directly affiliated with the university and be considered as integral parts of that institution, their administration being subordinate to that of the State university.

Section 2. ENROLLMENT AT THE STATE HIGHER INSTITUTIONS.

The best measure of the size of any college or university is the number of collegiate undergraduates and the number of graduate students. Students listed in other categories must be considered as

benefiting by incidental (and in some cases detrimental) functions performed by the institution. At the State college the regular collegiate students enrolled are outnumbered by the other students in attendance. A truly college atmosphere can not be properly maintained where the subcollegiate, special, and irregular students outnumber the collegiate students. In a different way, and to a less extent, the university suffers from the presence of a relatively large number of "special students." At the State school of mines the number of secondary-school students is almost equal to the number of collegiate students.

TABLE 98.—*Enrollments at the three degree-granting institutions of South Dakota in 1916–17.*

Institutions.	Collegiate undergraduates.	Graduate students.	Special and irregular students.	Summer-school students.	Secondary-school pupils.	Totals, excluding duplicates.
State university	481	39	108	81	.....	709
State college	267	5	[1] 67	155	[2] 346	895
State school of mines	48	.....	27	.....	43	118
Total	896	44	[1] 202	236	[2] 389	1,722

[1] Including 57 "short course" students at the State college.
[2] Including 265 pupils in the State college (secondary) school of agriculture.

The educational influences of the three collegiate institutions at present tend to be more localized than should be the case. This is shown by the geographical distribution of students in the various institutions. For the three institutions those figures may be summarized in the following table:

TABLE 99.—*Geographical distribution of collegiate students in the State university, the State college, and the State school of mines, in 1916–17.*

Distribution according to divisions of the State.

Full standing collegiate students only.	South-eastern division.	North-eastern division.	Western division.	Resident in the State.	Resident elsewhere.	Grand total.
Undergraduates and graduates only:						
State university	303	107	53	463	57	520
State college	85	219	15	349	23	372
State school of mines	2	3	40	45	3	48
Total	390	359	108	857	83	940
Percentages in different divisions of the State:						
State university	58.3	20.5	10.2	89.0	11.0	100.0
State college	22.8	66.9	4.0	93.8	6.2	100.0
State school of mines	4.2	6.3	83.3	93.8	6.2	100.0
Total	41.5	38.2	11.5	91.2	8.8	100.0
Percentages in each of the institutions of the State:						
State university	77.7	29.8	49.1	54.0	68.7	55.3
State college	21.8	60.4	13.9	40.7	27.7	39.6
State school of mines	0.5	0.8	37.0	5.3	3.6	5.1
Total	100.0	100.0	100.0	100.0	100.0	100.0

From these figures several facts may be understood:

1. Of all collegiate students in these institutions more than [illegible] tenths are residents of the State. In other words, the facilities provided for higher education in South Dakota primarily benefit State residents. The proportion of nonresidents is not excessive and does not interfere with the legitimate interests of the State. Such a small proportion of nonresidents benefits rather than hampers the work of the three institutions.

2. Of the total population of the State approximately 40 per cent is found in the southeastern division and about 40 per cent in the northeastern division. Collegiate enrollments from those divisions are in proportion about the same. Enrollments from the western division of the State are somewhat below the proportion of population in that division.

3. Of the total collegiate enrollments from the southeastern division more than three-quarters are at the State university. Of the total collegiate enrollments from the northeastern division more than two-thirds are at the State college. Of the total collegiate enrollments from the western division nearly one-half are at the State university, slightly more than one-eighth at the State college, and somewhat over one-third at the State school of mines. Of the total collegiate enrollments for the State 55 per cent are at the university, nearly 40 per cent at the State college, and about 5 per cent at the State school of mines.

4. Of collegiate students at the State university nearly three-fifths are residents of the southeastern division of the State, about one-fifth from the northeastern division, about one-tenth from the western division, and about one-tenth from other States. Of collegiate students at the State college about two-thirds are residents of the northeastern division, about one-fifth to one-quarter from the southeastern division, 4 per cent from the western division, and 6 per cent from outside the State. Of collegiate students at the State school of mines more than four-fifths are from the western division of the State.

These facts emphasize the importance of consolidating the collegiate education of South Dakota into a single State university, which shall include all departments of higher education now provided in the three separate institutions and all departments of higher education hereafter to be established.

Section 3. COURSES OFFERED AT THE HIGHER INSTITUTIONS.

At the present time provision is made in one or more of the degree-granting institutions of South Dakota for those types of higher education which appear to be justified and to the extent which the needs of the State appear to demand. Each of the three institutions, and

particularly the State university and the State college, provides types of instruction which may be considered fundamental to higher education and which must form service departments to most kinds of specialized professional work, such as the sciences, social studies, English, languages, mathematics, etc. In addition special forms of higher education are provided in one or more of the three institutions.

In the following table are presented figures showing the number of courses in each department actually given and enrolling students in each institution in 1916–17, together with the gross enrollments:

TABLE 100.—*Enrollment in courses and institutions.*

Departments.	Courses given in 1916-17.				Gross enrollments in 1916-17.[1]			
	University.	College.	Mines.	Total.	University.	College.	Mines.	Total.
English	27	12	2	41	445	452	47	944
Mathematics	13	11	5	29	143	154	37	334
Foreign languages	51	12	(3)	63	536	259	0	795
History and political science	15	7	(2)	22	282	130	0	412
Economics and sociology	13	4	2	19	322	83	16	421
Education	10	11	0	21	341	213	0	554
Home economics	14	12	0	26	213	295	0	508
Journalism	3	1	0	4	19	11	0	30
Fine arts	8	10	0	18	74	103	0	177
Zoology[2]	8	5	0	13	125	123	0	248
Botany	4	6	0	10	31	172	0	203
Chemistry	26	11	5	42	305	404	31	740
Physics	5	6	4	15	76	132	14	222
Electrical engineering	2	10	6	18	14	32	19	65
Civil engineering	10	12	17	39	30	84	98	258
Mechanical engineering	28	22	1	51	144	212	2	396
Public speaking	6	8	0	14	122	174	0	229
Geology, mineralogy	7	0	5	12	72	0	57	174
Philosophy	9	0	0	9	74	0	0	21
Bible	5	0	0	5	27	0	0	27
Physiology	2	0	0	2	14	0	0	14
Medicine	24	0	0	24	208	0	0	208
Law	38	0	0	38	1,000	0	0	1,000
Bacteriology and hygiene	3	0	0	3	20	0	0	20
Entomology, etc	0	4	0	4	0	63	0	63
Accounting	7	(3)	0	7	152	(3)	0	152
Pharmacy	0	10	0	10	0	132	0	132
Veterinary medicine	0	4	0	4	0	84	0	84
Agronomy	0	10	0	10	0	130	0	130
Animal husbandry	0	9	0	9	0	123	0	123
Dairy husbandry	0	8	0	8	0	95	0	95
Horticulture, forestry	0	3	0	3	0	60	0	60
Metallurgy	0	0	10	10	0	0	18	18
Mining	0	0	9	9	0	0	40	40
Totals	338	208	66	612	4,789	3,720	379	8,888

[1] The gross enrollments are determined by adding together all names in every course. The number of different individuals enrolled is sometimes much smaller, since the gross enrollment counts each name as many times as it may appear in different classes within any one department or in different departments. In a few cases this table would falsely appear to indicate that in some courses no instruction is given in an institution where the subject appears under another name or within a different department.

[2] Taken by preparatory students only in 1916–17.

[3] For the most part of subcollegiate grade at the State college.

These figures, in some cases, suggest the possibility that the offerings of the State institutions may have expanded somewhat beyond their legitimate bounds. Thus it may be questioned seriously whether 108 courses having a gross enrollment of 635 students (about six students per course) can be justified by the engineering needs of the State or the engineering interests of students. This question becomes all the more serious when it is realized that more than 50 other

courses in engineering were offered in 1916–17, but no students were enrolled in them.

In the following table are presented figures showing the extent to which courses were offered but not given in 1916–17, together with some figures for the gross enrollment in each institution.

TABLE 101.—*Courses and enrollments.*

Institutions.	Courses, 1916–1917.			Enrollments (gross).		
	Offered.	Given.	Not given.	Totals (gross).	Average per— Course offered.	Average per— Course given.
University	479	338	141	4,789	10.0	14.2
College	296	208	88	3,720	12.5	17.8
School of mines	121	66	55	379	3.1	5.7
Total	896	612	284	8,888	9.9	14.5

It appears that of all courses offered, according to the catalogues for 1916–17 in the three institutions taken collectively, nearly one-third were not actually given. It is, of course, obvious that the offerings of the State institutions must be sufficiently extensive to meet reasonable demands on the part of students in attendance and on the part of prospective students. Nevertheless, it is fair neither to students nor to instructors to offer a program of instruction which the institutions could not actually provide without placing a burden on the staff which it could ill support. Certainly until there is much greater demand than can now be found it is unreasonable to include courses in the catalogue which are seldom if ever actually given. Over-ambitious offerings in the catalogues contribute neither to the dignity nor to the efficiency of any institution.

Section 4. THE PROBLEM OF DUPLICATION.

Whenever two or more institutions are maintained in any State a certain amount of duplication of courses, departments, laboratories, libraries, equipment, and instruction is inevitable. Studies such as English, history, economics, mathematics, chemistry, physics, and the like, must be found in every institution which pretends to provide instruction of collegiate or university grade. Every institution must have its own library, its own laboratories, its own gymnasium, its own equipment, regardless of the provision for similar facilities in other institutions. Not all duplication, therefore, can be avoided under these conditions. Courses such as those mentioned above are administered almost as economically in two institutions as in one, provided the number of students enrolled in each of the institutions is large enough to afford economical enrollments in classes.

Duplication is justifiable in the case of studies which form the basis of any collegiate course and where duplicate courses in two institutions may be carried on as effectively and as economically as in one institution. It is not justified when there is costly specialized work in any department and when relatively small enrollments in each institution render the cost of instruction disproportionately large. This is almost invariably the case in connection with professional courses such as agriculture, engineering, law, medicine, pharmacy, and all graduate work.

Major and service lines of instruction.—Unfortunately, in most States maintaining two or more institutions for higher education the lines of differentiation have been but loosely defined. Even where the provisions determining the functions of institutions are definite and clear they show what one institution shall do rather than indicate what each institution shall not do. The result is that in most States any institution may provide almost any kind of instruction for which it can secure funds and for the support of which it can develop sufficiently strong political pressure. The difficulty arises particularly in connection with fields of instruction where needless and wasteful duplication is the result of failure to differentiate clearly the special functions of the different institutions. The successful operation of higher education in States maintaining two or more institutions is fundamentally dependent on the determination and maintenance of legitimate lines of differentiation.

The first step in securing this differentiation is the specification by the legislature or by the controlling board of special functions to be performed by each of the State institutions, particularly along lines of professional education. The second step is the rigid adherence to the provision that no other institution in the State should be permitted to encroach on the special field allotted to any one institution to such an extent as to make it a principal line of work leading to advanced instruction of a specialized character. To prevent such duplication of specialized instruction there is need for a distinction between fields which are the peculiar prerogative of one institution and those which may be offered in any other institution. The Bureau of Education has attempted to do this by distinguishing between major and service lines of instruction. Major lines are those which represent the principal fields of instruction assigned to any institution for development along advanced lines leading toward professional or other specialization on the part of the given institution, e. g., law, medicine, agriculture, engineering, pharmacy. An institution to which has been assigned special fields should be permitted to develop such fields as far as the interests of the State may allow, and no other institution in the State should be permitted to provide instruction in such fields as a major line. Service lines are those which,

while not representing specialized fields for instruction in one institution, are necessary for the properly rounded-out education of a student who may be specializing in a line quite different. Thus in one institution only should it be permitted to develop the study of history as a field of specialized concentration, i. e., as a major line. In every institution, however, some study should be provided as a subject contributing to the efficiency of an engineer, of a pharmacist, of a lawyer, or of a physician. Thus it comes about that what may be a major line in one institution may be a service line in another institution.

The value of making this distinction between major and service lines of instruction lies in the fact that thereby a criterion is secured for determining the extent to which certain fields of instruction may legitimately be developed in different institutions without leading to unjustifiable duplication. Home economics offers a good example. One institution only in any State should be permitted to offer home economics as a major line. Nevertheless, every institution in the State in which women are educated should afford some instruction in this field. Only that institution to which the specialized training of dieticians, teachers of home economics, etc., is allotted should be permitted to offer specialized and advanced instruction in this field as a major line. All institutions ought to offer instruction in home economics as a service line, leading to no professional preparation or degree. The importance of this distinction will appear more clearly in the following discussion of duplication in South Dakota:

DUPLICATION IN SOUTH DAKOTA.

By section 208 of the Revised Political Code the regents of education are given "full power to authorize for the institutions under their control such departments and courses of study as they may think best." Accordingly, no higher institution in the State can establish any course of study or department without the consent and specific approval of the regents, and the latter must be held responsible for the establishment of every course or department. Moreover, by section 211 of that code, the regents are directed "to administer the schools in such a manner as to enable each one of them to do in the best manner its own specific work, but all with a view to the strictest economy and so as to unify and harmonize the entire work of all the schools under their control." By the provisions of the same section of the code the regents "are expressly forbidden to continue or to create chairs, departments, laboratories, libraries, or other equipment in multiplication, except where the obvious needs of the special work of the schools make such multiplication necessary."

In the judgment of the survey committee the regents of education have violated the definite mandate of the law with respect to duplication in the fields of engineering and home economics. They have permitted questionable practices in the field of music and have allowed courses which more or less overlap in the normal schools, in the State university, and in the State college.

(1) *Duplication in engineering instruction.*—At the present time engineering departments are maintained in each of the three collegiate institutions maintained by the State and placed under the control of the regents of education, although the needs of the State and of the students could be met far more effectively and economically if such courses were limited to one institution. This appears from the figures presented in the following table:

TABLE 102.—*Figures illustrating engineering courses in 1916–17.*

	State university.	State college.	State school of mines.[1]	Total.
Courses offered, 1916–17	53	73	38	164
Courses offered but not given, 1916–17	13	29	15	57
Courses actually given, 1916–17	40	44	23	107
Classes enrolling 1–5 students each, 1916–17	25	26	15	66
Classes enrolling 6–10 students each, 1916–17	9	10	6	25
Classes enrolling more than 10 students each	6	8	2	16
Gross enrollments, 1916–17	188	328	117	633
Average enrollment per class actually given	4.7	7.5	5.1	5.9
Gross student clock-hours for the year	1,373	1,653	631	3,657
Total full-time instructors	3.25	6.00	[2] 2.00	11.25
Student clock-hours per instructor (semester)	211	138	[2] 158	163
Gross teaching hours for the year	107.0	121.0	64.5	292.5
Teaching hours per instructor (semester)	16.5	10.1	16.1	13.0
Engineering degrees, 1913 to 1917	23	32	([3])	55
Engineering degrees, 1917	3	6	([3])	9
Alumni (1912 to 1916) engaged as engineers	16	31	3	50
Alumni (total) engaged as engineers	34	81	11	126
Salaries for engineering instruction, 1916–17	$6,410	$10,400	$2,888	$19,698

[1] "Physics and Electrical Engineering" are combined in one department at the school of mines. In this table figures for electrical engineering only have been considered.
[2] A part of the time of one instructor is devoted to physics.
[3] The State school of mines is permitted to give special courses, but not to grant degrees in engineering except mining and metallurgy, which courses are not considered in this table.

From these figures several important facts may be deduced:

(a) Small enrollments in engineering courses in each institution render the cost of instruction extremely expensive.

(b) Nearly two-thirds of all courses actually given in 1916–17 enrolled from one to five students.

(c) The average size of classes actually given in 1916–17 was six students.

(*d*) All the work in engineering now provided in three institutions could be provided at far less expense and far more effectively in a single institution.

The present duplication of courses in engineering can not be justified on the ground that the "obvious needs of the special work of the

schools make such multiplication necessary," nor is it carried on "with a view to the strictest economy and so as to unify and harmonize the entire work of all the schools" under the control of the regents of education. The survey committee recommends the maintenance of engineering courses at one institution only.

(2) *Duplication in music instruction.*—It must be recognized that music instruction may form a part of the education of any student, whatever may be his field of specialized or professional training. For this reason courses in music have their place in any or all of the higher institutions of South Dakota. One institution only, however, should be permitted to develop courses in music as a major line leading toward specialization in that field, toward a special diploma, and in preparation for professional work in that field. At the present time two institutions in South Dakota maintain flourishing departments of music, and in each case the department is providing advanced and specialized work, i. e., both the State university and the State college provide music instruction as a major line.

The State university maintains a college of music, providing music instruction ranging all the way from the beginning stages (even for high-school pupils) to advanced graduate work for the training of professional musicians. It also provides courses for students who take no other work than that in music—"music preparatory and specials." It provides training leading toward a special degree, "Bachelor of Music." In other words, music at the State university is clearly a major line of instruction.

The State college provides a department of music, which offers three "courses": (1) Preparatory, (2) academic, and (3) collegiate. From the catalogue announcements and from the fact that there were 107 students taking music only at the college, it is clear that music is regarded not merely as a service line but also as a major line of instruction at the State college.

The survey committee believes that the regents of elucation should permit one institution only to maintain courses in music as a major line.

(4) *Duplication in commercial education.*—Attention has been called to the four-year curriculum in commerce offered by the university, to the several collegiate courses offered by the State college, and to the subcollegiate courses offered by each of these institutions. At the university the work is happily associated with the department of economics. At the State college the work in economics, from lack of support, has not been well developed, and commerce here is more closely related to the preparatory department. Since there is not likely to be any greatly increased demand for strictly collegiate work in this subject, the establishment of a faculty or division of com-

merce is not warranted, and as a matter of educational policy commercial education should be restricted to a single institution.

(5) *Duplication in home economics.*—Home economics was not definitely organized in the University of South Dakota until the fall of 1914. For a number of years preceding this a course in sanitation and hygiene had been listed which closely approximated that which is usually classified as home sanitation and placed under home economics.

In the university catalogue, issued in May 1913, the title "household arts" appears over a collection of four courses, one given by the instructor of chemistry, one by the professor of physiology, one given by the instructor in art and one by the instructor in finance. This group of courses was the forerunner of the home economics department.

The work was finally established as a result of an urgent demand by the students of the university with a very definite understanding that it should not duplicate the work done at the agricultural college. Unfortunately there has been no clearly defined field for home economics at the university, and consequently there is now a tendency to duplicate the work given at the State college. It is believed that the work should be developed as a major line at but one institution. It is rightfully a major line in land-grant colleges. In most of the middle west agricultural colleges, courses in home-making were established at the time the instruction was organized and have been continuously maintained since that time. This work was inaugurated in the South Dakota Agricultural College in 1887. The college now offers instruction in the four-year college course and in the secondary "school of agriculture."

Home economics instruction should of course be available for every college and university woman. It offers her training for enlarged usefulness and happiness in life; it increases her value as a leader in civic and community affairs; it is indeed a legitimate part of the liberal education of all women.

In the judgment of this committee, therefore, the work in home economics at the university should be continued as a service line only. It should supplement the training in liberal arts and education, but should not rival these in emphasis placed upon it. It should be as worthy of recognition as the home economics department at the State college, but should not duplicate the function of that department in the scheme of public education. It should enrich the training of the women students of the university but should not dominate that training. Being truly a "service" department, it should serve the maximum number of women students, giving to them the type of training most valuable for symmetrical development of mind and character.

In small high schools teachers frequently teach several subjects, one of which may be home economics. Graduates of the university would naturally prepare for teaching one or more academic branches. For this they should receive special teacher training. Their minor subject may be home economics, which they might be required to teach in combination with the academic subjects. For special professional training in the minor subject the maintenance of teacher training courses at the university can not be defended.

A similar situation may not infrequently develop for graduates of the State college. Employed primarily to teach home economics and trained for this, they may be required to teach English or history or even a language. Such combinations are at times necessary, though undesirable, but do not justify the State college in establishing courses in teacher training for English or language courses.

(6) *Duplication of collegiate and normal-school instruction.*—At the present time it appears that the work of the normal schools of the State and of the collegiate institutions of the State overlap in two respects:

(*a*) Collegiate instruction in the normal schools: The normal schools of the State should be so affiliated with the collegiate institutions that persons completing all or any part of the work of the normal schools, and otherwise qualified, should be admitted to the collegiate institution without unnecessary loss of time or standing. Nevertheless, it is also true that the normal schools should not become institutions wherein students should deliberately aim to secure the first years of their college education.

(*b*) Duplication in teacher training: Attention has already been called to the fact that there is more or less overlapping by the various higher institutions of the State in the training of teachers. Until the present time the regents of education have checked the efforts of the normal schools to train secondary-school teachers. They have not, however, prevented the collegiate institutions, particularly the State university, from training elementary school teachers, nor have they clearly differentiated the functions of the State university and the State college with respect to the training of teachers. In the judgment of the survey committee the regents should at once delimit the functions.

Section 5. DETERMINING WHAT SHALL BE MAJOR AND SERVICE LINES OF INSTRUCTION.

If the policy of consolidating the three collegiate institutions now maintained by the State into a single comprehensive State university be adopted, all difficulties of duplication or the assignment of special fields to the various institutions disappear. However, if the State

is unwilling to adopt this recommendation, it becomes imperative that definite regulations be made for the determination of major and service lines of instruction in the various institutions. The committee makes the following outlined recommendations:

(1) The State school of mines should be abandoned immediately, and instruction in mining and metallurgy (required by the constitution to be provided in one institution of the State) should be transferred to that other institution to which engineering is assigned. In the judgment of the committee that institution should be the State college.

(2) Agriculture and its allied fields should remain major lines at the State college.

(3) Law should remain a major line at the State university.

(4) Medicine should remain a major line at the State university.

(5) Pharmacy should be transferred as a major line to the State university. The reason for this recommendation is that there is no special connection between pharmacy and any other line of instruction conducted at the State college, and there is a very close relation between pharmacy and medicine, as well as the work of the State health laboratory and the food and drug commission located at the university.

(6) All engineering instruction should be consolidated at the State college and removed from the school of mines and from the university. Reasons for this recommendation are as follows: (*a*) The effective and economical conduct of engineering instruction in South Dakota requires its consolidation in one institution. (*b*) At present the State college enrolls the largest numbers of engineering students, has the largest corps of instructors in engineering, and has received the largest amount of money from the State, that money being invested in more expensive buildings and equipment than at the State university. (*c*) The State college at present provides several short courses and other courses apart from the regular collegiate work which utilize the equipment of the engineering department. (*d*) The removal of engineering courses from the State college would leave that institution with little except agriculture and home economics, thus destroying much of its real usefulness. (*e*) At the State college at present a large proportion of the cost of engineering courses is met by Federal funds. It is within the competence of the State legislature to transfer all or any part of those funds to any other institution if it so desires. However, it is desirable not to split those funds, using part for agriculture and its allied fields in one institution, and a part for engineering in another.

(7) Home economics should be made a major line at the State college and restricted to a service line in the State university.

(8) Music should be made a major line at the State university and reduced to a service line at the State college.

(9) Art should be made a major line at the State university and a service line only at the State college.

(11) On account of its intimate relation with economics, and since its withdrawal would seriously restrict the scope of this department, commerce should be made a major line at the State university and a service line at the State college.

(12) Education and training of teachers should be differentiated as follows: (*a*) The training of elementary school teachers should be the special and peculiar function of the State normal schools. (*b*) The training of secondary school teachers of agriculture, industry, home economics, and allied subjects, together with appropriate supervisors, directors, etc., should be the special and peculiar function of the State college. (*c*) The training of other secondary school teachers, together with the training of principals, superintendents, and the graduate training of school officers, should be the special and peculiar function of the State university.

Section 6. SECONDARY INSTRUCTION AT THE HIGHER INSTITUTIONS.

Preparatory instruction at the higher institutions.—Two of the State-supported higher institutions and each of the independent colleges maintain preparatory schools or "departments." For the year 1916–17, 498 students were enrolled in the preparatory departments of the several colleges of the State. Of this number 422 were from the State and 413 of these were from counties in which a four-year high school is located.

It is noteworthy that the preparatory departments of the South Dakota colleges are generally inferior in facilities for instruction to many of the high schools of the State, and frequently inferior to those in the town where the college is located. This applies to the preparatory departments of the independent colleges as well as to those of the State-supported colleges at Brookings and at Rapid City. In deference to the will of the local school authorities, the State-supported institutions claim that they usually reject preparatory students from the immediate vicinity, but at the State college in 1916–17, one-third of the preparatory students were from the county in which the college is located, and the post-office address of most of these was given as Brookings. The remaining students were mostly from near-by counties. The preparatory department at the college, therefore, is not serving the State as a whole.

The school of agriculture at the State college.—The criticism directed at the college preparatory departments may be applied with equal force to the so-called "school of agriculture" maintained by the South Dakota State College at Brookings. This school offers a curriculum covering four years of five months each. It is open to

both men and women (the women select home economics subjects in the place of technical agriculture) of any age, over 14 years, provided they have completed the eighth grade in the public school. For the year 1916–17 there were registered in the "school of agriculture" 265 students, of whom 254 were residents of the State of South Dakota. Of this number, 232 were from the counties in which are located State accredited four-year high schools. Seventy-seven per cent of the young women registered for the home economics curriculum in "the school of agriculture" were from counties in which are located approved high schools giving courses in home economics. There is a demand for practical secondary instruction in agriculture and home-making, but it is clearly the function of the local high schools to supply it. Many more young people would continue in school if instruction of this kind could be obtained locally. This is clearly shown by the fact that a large proportion of the enrollment in the "school of agriculture" consists of students from sections near Brookings. Under the provisions and support of the Smith-Hughes act, schools should be established throughout the State where students desiring to take a secondary agricultural course may receive the desired training. These schools will need the encouragement and support of their respective regions.

There is also a demand for practical technical training in agriculture and home economics adapted to the needs of mature students who can not meet regular entrance requirements or who can not avail themselves of the regular college course. The real opportunity of the "school of agriculture" at the college, therefore, is to meet this demand. While the school is open to this class of students, it is not restricted to such, and in consequence classes are composed of persons of all ages. Of the 265 students enrolled in 1916–17, 76 per cent were under 21 years of age and 12 per cent were not more than 16 years of age. It is apparent, therefore, that the students are mainly of secondary school age, and in this respect they are very much like the college preparatory students. The median age of the "school" students is 19 years, while that of the preparatory students is 18 years. About 40 per cent of these students are at least 20 years of age, and may be said to represent the institution's unquestioned clientage.

Commercial courses.—At both the university and the State college secondary instruction in commercial subjects is offered. At the university in 1917–18 there were registered as special students 23 young men and women of high-school age who were carrying commercial subjects only. In all cases these were students from the local high school who by special arrangement were permitted to take commercial work at the university and to receive high-school credit. The university, to this extent, therefore, is still engaged in preparatory work, but in this case the State as a whole is supporting an

educational enterprise that benefits only the local community. The number of students taking this work at the university is sufficient to warrant the establishment of a commercial course in the local high school.

Although many of the commercial courses offered by both the university and the State college are of college grade, some are of strictly secondary grade, and are taken mainly by students from the local communities. So long as such facilities are provided by the higher institutions, so long will the local schools defer the introduction of commercial courses and so long will the collegiate institutions be hampered in their generally approved functions.

Music courses.—Both the university and the State college are offering elementary or preparatory instruction in music. Since special fees are imposed upon students of music in either institution, it may be assumed that the work of instructing these local students is self-supporting; and since the high schools are not likely to be affected immediately by this practice, there should be very little objection to the efforts of these institutions to be of service to their local communities. The committee suggests, however, that such service should be promoted as a separate enterprise, and thus remove the danger of criticism arising from "padding" enrollments with noncollegiate students.

The committee recommends that the preparatory departments and all other instruction of secondary grade, except possibly music, at the State-supported higher institutions be discontinued. The reasons for such a recommendation may be summarized as follows:

1. There are now many high schools scattered over the State where students from sparsely settled sections may obtain the necessary preparation for college without going so far from home and usually at less expense.

2. So long as the communities without high schools can send their young people to the State institutions for their college preparation, so long will they defer the establishment of a local high school, which is essential to the general intellectual development of all people of the community.

3. The small and ill-supported high schools of many communities would be greatly stimulated in their development if the students from these communities could be enrolled in the nearest school where the necessary preparation may be obtained.

4. The standards set by the college preparatory departments, unless maintained at the maximum, are likely to be regarded by the high schools as the ideal college preparation and thus put a damper upon continued effort toward improvement.

5. The instructors employed in the preparatory department, especially at Brookings, could be used to relieve a serious condition of

overwork on the part of the instructors in some of the academic departments of the college.

Section 7. TRAINING AND EXPERIENCE OF FACULTY MEMBERS.

Figures for the training and experience of faculty members in the three institutions are summarized in the following table:

TABLE 103.—*Training and experience of faculty members of the State college, the State university, and the State school of mines.*

	Total number.	Highest degree held.				Total years college teaching.						
		None.	Bachelor.	Master.	Doctor.	1	2	3	4	5	6–10	10
Professors	71	4	19	27	21	1	3	3	4	2	19	39
Associate professors	5	0	1	4	0	0	0	0	0	0	2	3
Assistant professors	12	3	2	7	0	0	0	0	1	0	7	4
Instructors	26	5	16	5	0	13	4	2	2	2	2	1
Total	114	12	38	43	21	14	7	5	7	4	30	47

Of the 49 instructors at the university, 34 hold the rank of full professor, while 3 only hold the rank of assistant professor. It would appear to have been the policy of the university to advance men and women rapidly to the highest rank. There is a noteworthy lack of balance between the number of full professors and assistant professors. Here several factors are important, but the financial considerations are not to be overlooked.

About one-third of the staff of instructors have not received professional preparation sufficient to secure for them an academic degree above that represented by the baccalaureate. This fact indicates that a large proportion of the instruction in the university is conducted by instructors whose university training is but slightly superior to that of many of the students under their instruction. This is particularly noticeable in the case of full professors, about one-third of whom possess no degree above the baccalaureate. To a considerable extent, of course, certain lacks in formal collegiate or university training are offset by long experience in college teaching. It is also true that many members of the staff of instructors have pursued advanced work in college or university without securing advanced degrees.

It is noteworthy that of the 15 assistant professors and instructors 3 only have secured their highest degree at institutions other than the University of South Dakota. In such circumstances there is always the danger of educational inbreeding. The dangers of educational inbreeding are also to be observed in the fact that one-half of the total staff have taught college classes at the University of South Dakota only.

On the whole the university employs instructors whose capacity for college teaching has been well attested by successful experience extending over a satisfactory period. Numerous factors render it difficult to estimate the professional attainments and professional contributions exemplified by professional publications, researches, etc. It would appear that members of the faculty of the State university as a whole have rendered significant contributions to the institution, to the State, and to society. In some departments, however, there is a noteworthy lack of such professional contributions as should be expected from members of the faculty of a State university. Efficient instruction itself postulates productive scholarship and research.

Of the 29 full professors and of the 61 members of the State college faculty, 4 only have received the doctor's degree. Nearly one-half of the instructing staff have received no degree above baccalaureate. With due allowance for other factors involved, it would appear that as a whole the faculty of the State college is somewhat below par with reference to such qualifications as may be indicated by the degrees held.

It is worthy of note that 32 out of 61 members of the college staff of instruction have had experience in college teaching at the State college only. It is not improbable that the college would benefit from the presence on its staff of a larger proportion of men and women who have had experience in other institutions and who, as a result of that outside experience, might contribute much to college ideals and methods. It is not impossible that the maintenance of present conditions may lead to some degree of educational inbreeding.

On the whole, the State college employs instructors whose capacity for college teaching has been approved by successful experience extending over a period of years. In this connection, however, the point raised above should not be neglected.

Of the 61 members of the staff, 10 only have made contributions through publications within the past two years. The total number of publications within that period was 21. It would appear that members of the State college faculty have, as a whole, failed to manifest through publications that evidence of research and professional interest which may justly be expected. Noteworthy exceptions to the above statement do not invalidate the essential justice of the charge for the faculty as a whole.

From such evidence as the survey committee has been able to secure there is every reason to believe that the State college is well meeting its obligations as a land-grant college to contribute to the development of the agricultural interests of the State. Through its

experiment station, through its extension division, and through the individual activities of members of the family, the college is making significant contributions.

The survey committee makes the following recommendations:

(1) As opportunity offers in the employment of new members of the instructional staffs, the officers of the State university and of the State college should attempt to secure men and women whose qualifications are attested by the attainment of higher degrees received from institutions of standing. This is particularly true for the State college. In making such a recommendation the committee is well aware of the inadequacy of considering advanced degrees as satisfactory evidence of the qualities desired. It is nevertheless true that advanced degrees are one of the few rather definite indications that prospective members of the faculty have at least had the opportunity to secure the kind of advanced training which should be expected of instructors at the university or at the State college.

(2) In the future, officers of the State university should be on their guard against the tendency to advance faculty members so rapidly that the instructional staff is overbalanced with men and women holding the highest teaching offices in the institution. At present, the number of full professors is out of proportion to the number of assistant professors and instructors.

(3) Administrative officers of the State university and of the State college should be on their guard against the dangers of educational inbreeding. The vitality of any higher institution is intimately dependent on the infusion from without of new ideals and of new methods. The fact that more than one-half of all instructors in the higher institutions of South Dakota have had experience in those institutions only suggests the possibility that educational inbreeding may be a real danger.

(4) With notable exceptions, it would appear that members of the faculties of the higher institutions of South Dakota are not completely fulfilling legitimate expectations with respect to productive scholarship. The close relation which exists between effective instruction and research would justify the suggestion that administrative officers encourage research and contributions by a larger proportion of the instructional staffs (*a*) by considering the capacity for productive scholarship as one of the qualifications to be looked for in employing new faculty members, (*b*) by so arranging the burdens of teaching that time and facilities may be available for research, (*c*) by direct stimulation, (*d*) by demanding a salary budget sufficient to attract men and women with the capacity for extra instructional work as a regular part of their employment.

Section 8. THE WORK OF FACULTY MEMBERS.[1]

For the State university as a whole (excluding the college of music, not here considered), the average number of semester teaching hours per instructor is satisfactory. On the other hand, the average number of student clock hours per instructor is low. The Bureau of

[1] The interrelation of many factors renders difficult the measurement of the services of faculty members in any institution. Few members of the faculty perform services which are limited to the classroom or laboratory. Each, to some extent, must render services on various committees and be responsible for many extra classroom duties necessary for the effective administration of the institution. Furthermore, members of the faculty should be expected to engage in forms of productive scholarship which can not be measured in terms of teaching hours. In addition, heads of departments, deans, and other instructors who are responsible for various forms of administrative activity must necessarily devote no small part of their time and energy to college tasks which are not readily susceptible to ordinary measurement. For these reasons the services of any instructor must be considered as including not only his work in class activities involving direct instruction but also his work in various forms of administrative activities.

The actual amount of time expended by any instructor in classroom or laboratory is easily measured. Here again, however, a number of variable factors enter, serving to render interpretation and evaluation difficult. Obviously the energy and time demanded of different instructors in connection with the work of instruction differ in many ways, in the number of students under instruction, in the charcter of the prepartion necessary for any single class meeting, in the labor entailed in the correction of papers, themes, exercises, reports, conferences, etc. It is obvious, therefore, that no single measure can give a complete indication of the services rendered by various instructors.

Students' programs of work are commonly estimated in terms of "credit hours." Ordinarily this is the same as a "semester hour," which means one hour of work per week for a half year. The basis of the measurement is the lecture or recitation period, with its accompanying amount of preparation. Usually two or three hours of laboratory or field work are considered as equivalent to one hour of recitation, quiz, or lecture. This is on the assumption that every recitation, quiz, or lecture presupposes about two hours spent in preparation, while laboratory or field work commonly requires little or no previous preparation by the student.

In measuring the instructional work of faculty members two methods may well be employed, either supplementing the other as an indication of the amount of service performed. One of these methods uses the number of hours spent by the instructor in the classroom or laboratory as the unit, assuming that two hours of work in the laboratory are approximately equivalent to one hour of lecture, quiz, or recitation. This unit, therefore, is essentially the same as the "credit hour." For convenience it may be called the "semester teaching hour." However, when this unit is the only unit of measurement applied a wide margin of error is possible in many cases. For instance, an instructor in Greek may give four courses, each meeting three class hours per week for a half year. His total semester teaching hours would then be 12. His colleague in English department may give four courses, likewise meeting three times per week each, with a total of 12 semester teaching hours. If, however, the enrollments in the Greek courses are 3, 2, 4, and 5 students, respectively, and the enrollments in the English courses are 50, 28, 35, and 40 students, it is clear that the teaching load of the English teacher is much heavier than that of his colleague in the Greek department, especially with the extra classroom work involved in the correction of written work.

The second method available for the measurement of instructors' teaching loads is the "student clock hour." It may be described thus: One student under instruction in lecture, quiz, recitation, or laboratory work for at least 50 minutes net represents one student clock hour. Twenty students in one class which meets one 50-minute period per week for one semester would give a total of 20 student clock hours. If that same class meets three times per week the number of student clock hours would be 60. It will be noted that with this unit one period spent by the teacher in laboratory work or field work counts equally with one period spent in lecture, quiz, or recitation. Doubtless in some cases the teacher's burden in laboratory work is less than in classroom work. In other cases the arrangement of apparatus and planning of the work necessitates fully as much labor and time as might be spent by the instructor in connection with a lecture or recitation period. It should be obvious that the relation between classroom and laboratory work for the teacher is far different from that for the student.

The use of the semester teaching hour as the only unit, or the use of the student clock hour as the sole unit, might well lead to very false estimates of the services performed by different instructors. Either may well serve as a cross check on the other. Hence, in this investigation, both units were employed.

Education has previously suggested that in an institution where research work is to be encouraged and expected, it is reasonable to expect also a departmental average of 250 student clock hours for each instructor per semester. This would be the equivalent of 10 semester teaching hours per instructor with classes averaging 25 students each—a reasonable working standard. In a college where the greater part of the work of instruction is limited to undergraduate work, an average of 300 student clock hours per semester for each instructor would not appear to be excessive. This would be the equivalent of 12 semester teaching hours per instructor with classes averaging 25 students each. The average number of teaching hours for an instructor per semester is about 13 for the university as a whole, while the average number of semester clock hours per instructor is only 219. Here is further evidence of the fact, noted elsewhere in this chapter, that there is an excessive number of small classes in the university. The existing situation calls for the attention of administrative officers.

In the college of engineering there is found an excessive burden of semester teaching hours per instructor combined with a low number of semester student clock hours per instructor. This is due to an excessive number of small classes, which in turn is due to the policy of duplication in engineering courses permitted by the regents of education. In the college of law the situation is satisfactory. In the college of medicine the average number of semester teaching hours is excessive, while the number of semester student clock hours is somewhat below standard. This situation is in part due to the fact that the college of medicine is in a stage of development, perhaps even of experimentation, and in part to the fact that its special character as a very complex professional department places it in a category somewhat different from other departments of the university. Means should be taken to reduce somewhat the present excessive burdens of instruction imposed on the force of instruction in this department.

In the college of arts and sciences the number of semester teaching hours per instructor is satisfactory, while the number of semester student clock hours is excessively low. Here in particular there is need for administrative recognition of the deleterious effects of a large number of small classes. While the average teaching load for instructors in the college of arts and sciences is not excessively heavy, in some departments there is evidence that the teaching burden of certain instructors should be reduced at once. An instance is found in the case of the assistant professor of English, who in 1916–17 had 21 hours of classroom work in each semester and whose burden of student clock hours was 469 during the first semester and 388 during the second semester. During the first semester the number of his student clock hours was equal to the combined student clock hours

of the professor (and dean) of economics, the professor of fine arts, the professor of Greek, the professor of Latin, and the professor of civil engineering. His combined student clock hours for both semesters were more than the total combined student clock hours of the professor of economics, the professor of fine arts, the professor of Greek, the professor of journalism, the professor of Latin, and the professor of mathematics.

In several cases there is evidence of an excessive number of semester teaching hours combined with a relatively small number of semester student clock hours. Instances may be found in the cases of the professor of English, the instructor in English, the professor of Greek, the professor of history and political science (second semester), and the professor of Latin.

For the State college as a whole the average number of teaching hours per instructor and the average number of student clock hours per instructor are not excessive.

In some cases the burden of teaching is apparently excessive. This would appear to be the case for the associate professor of agronomy, of whose time only five-elevenths is supposed to be devoted to instruction. During the first semester his burden of teaching hours was 17 and his burden of student clock hours 338. This would also appear to be true of the professor of botany, whose total student clock hours were 430 for the first semester and 378 for the second semester. The abnormally heavy program of the associate professor of chemistry and of the assistant professor of chemistry may be explained in part, but not wholly, by the absence on leave of the professor of chemistry during the second semester. Likewise the excessively heavy burden of the instructor of pharmacy during the second semester may be explained by the death of the professor of pharmacy. The burden of the professor of English was excessively heavy during the first semester.

The effect of small classes is to be noted in civil engineering, electrical engineering, and experimental engineering, where the relatively large burden of teaching hours is accompanied by a relatively small burden of student clock hours in civil and electrical engineering. This has its bearing on the problem of duplication in engineering courses elsewhere discussed.

The excessive programs of work carried by some instructors are illustrated by the following: During the first semester the professor of civil engineering provided 12 periods of recitation or lecture and 36 periods of laboratory work in addition to some instruction in the preparatory school. During the second semester the professor of metallurgy provided 18 periods of recitation or lecture and 21 periods of laboratory work. During the same semester the professor of geology and mineralogy provided 17 periods of recitation or lecture

and 19.5 periods of laboratory work in addition to some preparatory-school instruction. Such programs as these are totally indefensible.

Summary.—On the whole the number of teaching hours per instructor in the collegiate institutions of the State is generally satisfactory, though important exceptions are numerous and considerable variability is found. The attention of administrative officers is called to all instructors' programs which show semester teaching hours above a standard of 15. From the figures presented it is clear that in general the number of student clock hours is in general rather low, though here again variability is found, and in many individual cases noteworthy departures from a reasonable standard are to be observed. The attention of administrative officers is called to wide variations from the standard as shown by the tables given above.

Particularly noteworthy is the fact that in many cases, and in the averages for institutions, satisfactory or even excessively high teaching-hour burdens are accompanied by excessively low student clock-hour burdens. This is, in many cases, at least, due to the large number of courses enrolling few students. The remedy in some of these cases will doubtless be found in the exercise of greater care in the offering and giving of courses enrolling few students.

On the basis of the data available, the survey committee feels justified in making the following recommendations:

(1) A working standard should be adopted for teachers' programs of instruction. The committee suggests that the number of teaching hours per semester for an instructor on full time for instructional purposes be set at not more than 15 and that the number of student clock hours per semester for an instructor be set at between 250 and 300, according to the nature of his work.

(2) Excessive teaching programs at present found should be reduced. Officers should make a careful investigation of instructors' programs at least twice a year for the purpose of adjusting any unnecessarily great variability.

Section 9. SALARIES.

The primary factor determining the salaries to be paid to faculty members in any institution is the maintenance of a sound educational policy. In the long run the quality of instruction is vitally affected by the salaries paid. Other things being equal, the payment of good salaries will attract and retain good instructors. Other things being equal, the payment of low salaries sooner or later will prevent good instructors from joining the faculty or will lead such good instructors as may be secured to consider the institution merely a stepping stone to more remunerative positions in other institutions.

Salaries in other universities and colleges.—The following are maximum and minimum salaries paid to faculty members of our grades in different colleges and universities throughout the country.

TABLE 104.—*Average maximum and minimum salaries in 90 State colleges and universities in 1915–16.*

Positions.	Size of faculty.			
	Under 26.	26 to 50.	51 to 100.	101 to 200.
President[1]	$3,828	$4,578	$5,023	$5,[illegible]
Deans, maximum	2,050	2,969	3,054	3,[illegible]
Deans, minimum	2,050	2,238	2,409	2,4[illegible]
Professors, maximum	2,423	2,300	2,645	2,[illegible]
Professors, minimum	1,742	1,776	1,879	1,[illegible]
Associate professors, maximum	1,780	1,825	1,922	2,[illegible]
Associate professors, minimum	1,367	1,550	1,691	1,[illegible]
Assistant professors, maximum	1,514	1,658	1,638	1,[illegible]
Assistant professors, minimum	1,350	1,383	1,314	1,[illegible]

[1] In the majority of cases the president's house is also provided.

When figures for the State college and for the State university of South Dakota are compared with figures for other institutions of somewhat similar character it appears that, while the maximum salaries are not notably low, the minimum salaries are distinctly low and the number of professors, associate professors, and assistant professors receiving low salaries is great. With the exception of a few faculty members (who, for the most part, occupy also administrative offices or have other duties in addition to their instructional duties) instructors at the collegiate institutions of South Dakota receive salaries quite inadequate, whether viewed from the standpoint of conditions peculiar to South Dakota or from the standpoint of comparison with other institutions of the same character. This is, of course, particularly true for the State school of mines.

At present all three institutions are fortunate in having a relatively large number of faculty members whose long and efficient service to their respective institutions is neither determined nor measured by purely financial considerations. However, in the natural course of events new instructors must be added to the staffs in order to replace those whose services are terminated and to provide for developments inevitable in the growth of the institutions. Unless the salary schedules are materially raised in the near future the State of South Dakota can not hope to attract or retain efficient instructors. In fact, the State university and State college already feel their inability under present conditions to compete with other institutions of the same rank. The State can not afford to engage inferior instructors or to permit its collegiate institutions to become merely convenient stations where promising young men and women may gain their experience in college teaching, only to devote their

years of productive teaching and scholarship to other institutions which pay better salaries. In raising the general schedule for collegiate instructors the State would perform not an altruistic service to college instructors, but a service to itself. The primary consideration for the State is in the problem of its own interests.

In connection with the problem of salaries at the State university it is worthy of note that successive presidents of the institution repeatedly called attention to the necessity of increases if the work of the university is to be rendered effective. But in spite of some increases in salaries at the State university within the past few years, the salary schedule as a whole is far too low to secure or retain men and women equipped for the work which should be expected in a State university. In this connection it is worthy of more than passing interest that budget estimates at the State university have always passed through a double "paring down" process. This is clear from the figures presented in the following table:

TABLE 105.—*Salary estimates, recommendations, appropriations, and payments at the State university.*

College year.	Recommendations by the president.	Recommendations by the regents.	Appropriation by the legislature.	Actually disbursed for salaries.[1]
1905–6	$45,000	[1] $45,000	$40,000	$47,398
1906–7	50,000	[2] 50,000	40,000	48,204
1907–8	50,000	50,000	45,000	55,762
1908–9	50,000	50,000	45,000	55,364
1909–10	65,000	60,000	55,000	63,107
1910–11	65,000	60,000	55,000	68,716
1911–12	80,000	70,000	65,000	74,936
1912–13	80,000	70,000	63,000	82,332
1913–14	90,000	80,000	70,000	96,363
1914–15	90,000	80,000	70,000	91,686
1915–16	110,000	90,000	78,000	103,858
1916–17	110,000	90,000	82,500	.....
1917–18	120,000	110,000	93,000	.....
1918–19	120,000	110,000	97,000	.....

[1] Appropriations, plus tuition fees and other "local funds."
[2] Revision by regents at the request of the legislature reduced these two recommendations to $43,000 each.

It would appear that the regents of education had adopted the vicious policy of reducing the president's estimates by approximately 10 per cent and that the legislature had adopted the further vicious policy of reducing by approximately 10 per cent the recommendations of the board which it itself has established to examine the needs of the institution. The double "paring-down" policy can have no justification.

Study of the salary figures for the State school of mines shows that the salaries paid to full professors are approximately the salaries paid to fairly good high-school teachers. The principal of the Sioux Falls High School receives a salary of $3,100. The presi-

dent of the State school of mines receives a salary of $3,000. The average salary of the eight highest-salaried teachers in the Sioux Falls High School is $1,556. The average salary of the eight full professors at the State school of mines is $1,590.

Summary.—Certain important conclusions may be drawn concerning the salary schedules of the three institutions under consideration:

(1) With relatively few exceptions the salaries paid to faculty members in the State university, the State college, and the State school of mines are low—so low that the efficiency of instruction is seriously imperiled.

(2) With an average salary of $2,000 and a standard teaching program of 500 to 600 student clock hours per week for both semesters combined (250 to 300 per week per semester), an average cost of instruction per student clock hour would be between $3 and $4 for salaries. Where salary costs rise above that figure one may expect to find—(*a*) too few classes taught, (*b*) small enrollments in classes, or (*c*) unusually high salaries paid. Where salary costs fall below those figures one may expect to find (*a*) teaching program too heavy, (*b*) overlarge classes, or (*c*) low salaries.

(3) The machinery whereby salary budgets are determined is faulty. The best educational interests of the State are not conserved when a double "paring-down" process is performed by the regents of education and the legislature. Salary costs do not fall within the same category in this respect as do expenditures for buildings, etc. Definite salaries should be set for positions of rank from assistant professor up and the budget therefor fixed accordingly. It is beneath the dignity of the State to bargain with individuals concerning the salaries to be paid for professional work.

On the basis of its investigation the survey committee makes the following recommendations designed to remedy the defects considered above.

(1) The establishment of a salary schedule for faculty members of rank from assistant professor to dean. An average of $2,000 per department should be considered as a reasonable mean. The minimum salary for dean or other officer performing similar duties should be set at $3,000. The minimum salary for a full professor should be set at not less than $2,500. The minimum salary for an associate professor or an assistant professor should be set at not less than $2,000.

(2) In each case where the salary cost per student clock hour is more than $4 per department the administrative officers of the institution should determine whether that excessive cost is due (*a*) to excessively high salaries, (*b*) to deficient teaching programs, (*c*) to an excessively large number of classes with small enrollments, or

(*d*) to some factor peculiar to the particular work. Efficient administration can well remedy some of the defects thus disclosed.

(3) In each case where the salary cost per student clock hour is less than $3 per department the administrative officers of the institution should determine whether that excessively low cost is due (*a*) to teaching programs which are excessively heavy, (*b*) overlarge classes, (*c*) excessively low salaries. Certain defects in the present situation may readily be corrected.

(4) The legislature should cease to place the salary budgets of the three institutions in the same category with financial budgets involving buildings, new ventures, or even equipment and maintenance. Neglect to appropriate desired money for buildings, expansion, even maintenance and equipment creates but temporary loss. Parsimony in salaries is more serious and frequently leads to permanent injury to the institution. Expenditures for material equipment, for maintenance, for expansions in the work of the institutions, or for buildings and land may be somewhat irregular without serious and lasting damage being done. Salaries, on the other hand, must from their very nature be essentially regular in maintenance and increase. The legislature would do well to encourage a settled salary policy in the various institutions, even with the expectation that that policy must change as conditions change.

Section 10. THE COST OF HIGHER EDUCATION.

South Dakota ranks seventeenth among the 48 States on the basis of the amount spent on higher education for each thousand dollars of wealth. Compared with two western States having approximately the same population, South Dakota spent for the year given in the census report about 7 per cent more than Oregon and 15 per cent more than North Dakota, although recognition should be made of the variable factors which enter into these comparisons.

South Dakota ranks sixteenth on the basis of per capita receipts of higher educational institutions, including normal schools. But the per capita receipts of South Dakota are considerably less than those of the States mentioned above, Oregon and North Dakota exceeding South Dakota by 11 per cent and 32 per cent, respectively.

Notwithstanding the apparent liberality of the taxpayers in supporting the educational work of the State, there is good reason to believe that a much greater liberality will be necessary in order to reach the highest standards of education which are in demand by wealthy and rapidly growing States. Attention is also called to the fact that Iowa and Minnesota, States with much greater population

and wealth than South Dakota, are spending from 4 to 21 per cent more per capita.

Per capita costs of higher education.—Tables 106 and 107 show the cost per student at the State institutions of South Dakota in comparison with those of Washington, Iowa, Nevada, and Arizona.

TABLE 106.—*Comparative per capita cost of higher education in the States of Washington, Iowa, Nevada, Arizona, and South Dakota.*

(Based on the average enrollment.)

	Washington.		Iowa.		
	1913–14		1913–14		
	State university.	State college.	State university.	State college.	Teachers' college.
Number of students enrolled in first semester	2,263	947	2,343	2,292	[1] 1,297
Number of students enrolled in second semester	2,373	972	2,235	2,207	1,348 1,245
Total enrollment	4,636	1,919	4,580	4,559	3,926
Average attendance for the year	2,318	959.5	2,299	2,279	1,309
Total operating expenses, excluding summer school	$517,505.00	$343,865.00	$629,069.24	$616,654.33	$220,018.22
Cost per student of average attendance	$223.49	$358.37	$275.00	$270.00	$168.00
	1914–15		1914–15		
Number of students enrolled in first semester	2,724	1,013	2,416	2,522	[1] 1,406
Number of students entolled in second semester	2,645	956	2,303	2,467	1,485 1,366
Total enrollment	5,369	1,969	4,719	4,989	4,257
Average attendance for the year	2,684.5	984.5	2,360	2,495	1,419
Total operating expenses, excluding summer school	$517,505.00	$285,299.00	$648,195.10	$677,146.68	$241,007.52
Cost per student of average attendance	$192.77	$289.79	$274.50	$271.00	$170.00

	Nevada.	Arizona.	South Dakota.		
	1914–15	1915–16	1915–16		
	State university.	State university.	State university.	State college.	School of mines.
Number of students enrolled in first semester	310	403	558	.....	67
Number of students enrolled in second semester	316	.....	505	.....	62
Total enrollment	626	.....	1,063	.....	129
Average attendance for the year	313	[2] 413	531	358	65
Total operating expenses, excluding summer school	$138,717.96	$165,510.90	$144,078.07	$158,955.00	$36,680.51
Cost per student of average attendance	$443.18	$400.73	$271.30	$441.21	$564.32
	1915–16		1916–17		
Number of students enrolled in first semester	328	.....	631	.....	116
Number of students enrolled in second semester	331	.....	622	.....	78
Total enrollment	659	.....	1,253	.....	194
Average attendance for the year	329.5	.....	626	365	97
Total operating expenses, excluding summer school	$172,254.23	.....	$151,059.00	$170,947.71	$33,961.57
Cost per student of average attendance	$522.77	.....	$241.29	$468.35	$350.12

[1] Terms. [2] Registrar.

Table 106 gives in detail the enrollment, average attendance, total operating expenses, excluding those of the summer school, and the cost per student based on the average attendance for two successive years. Although a number of the surveys were made a year or two before that of South Dakota, this difference probably does not seriously detract from the value of the comparisons. Table 107 compares in minimum and maximum order the costs for each year of the two included in the survey of all the State institutions under discussion. The median cost is also indicated. Table 108 compares the average cost based on the two years and shows the relative position of each institution in the minimum and maximum order. Special attention is called to the position of the State college and the school of mines as shown in these tables.

TABLE 107.—*Per capital costs of instruction in the institutions surveyed by the Bureau of Education, giving each year in minimum-maximum order.*

Iowa State Teachers' College, 1913–14	$168.00
Iowa State Teachers' College, 1914–15	170.00
Washington State University, 1914–15	192.77
Washington State University, 1913–14	223.49
South Dakota State University, 1916–17	241.29
Iowa State College, 1913–14	270.00
Iowa State College, 1914–15	271.00
South Dakota State University, 1915–16	271.30
Iowa State University, 1914–15	274.50
Iowa State University, 1913–14	275.00
Washington State College, 1914–15	289.79
South Dakota State School of Mines, 1916–17	350.12
Washington State College, 1913–14	358.37
Arizona State University, 1915–16	400.73
South Dakota State College, 1915–16	441.21
Nevada State University, 1914–15	443.18
South Dakota State College, 1916–17	468.35
Nevada State University, 1915–16	522.77
South Dakota State School of Mines, 1915–16	564.32
Median	275.00

TABLE 108.—*The per capita costs based on the average of the two years included in each survey.*[1]

Iowa State Teachers' College, 1913–15	$169.00
Washington State University, 1913–15	208.13
South Dakota State University, 1915–17	256.29
Iowa State College, 1913–15	270.50
Iowa State University, 1913–15	274.75
Washington State College, 1913–15	324.08
Arizona State University, 1915–16	400.73
South Dakota State College, 1915–17	454.78
South Dakota State School of Mines, 1915–17	457.22
Nevada State University, 1914–16	482.97

Suggested basis of comparing costs.—A study of the accompanying tables shows that the per capita costs of the State college and the State school of mines are very high. While it is impossible to determine arbitrarily what the per capita cost should be, it is suggested that in the light of previous surveys the cost figure for a university of recognized standards, such as the Iowa State University, may be made a suitable basis of comparison. This figure, $275, which also happens to be the median cost, as shown in Table 107, may be used in comparing costs for the years 1915–1917, and is one that is also in harmony with the cost figures suggested by the Bureau of Education in its previous surveys.

Institutions compared.—If the average cost per student at the university were $275, the total expenses would be $169,036.46; they now are $147,568.83, or 12.7 per cent less than the suggested standard.

If the average cost per student at the State school of mines were $275, the total expenses would be $21,406.64; they are now $35,321.05, or 65 per cent more than the suggested standard.

According to Table 108 the per capita cost of instruction at the State university (based on the average of two years) is $14.21 less than that of the Iowa State University; the per capita cost at the State college is $183.72 more than that of the Iowa State College, $198.48 more than that of South Dakota State University, and $276.76 more than that of the Iowa State University. The cost at the school of mines is approximately the same.

Observations and conclusions.—The foregoing data go to show that the university is the only State institution of higher education which is operated at a figure below the suggested standard. It is

[1] Arizona includes one year's report only.

therefore possible to incur additional expense of about $20,000 annually for the needs of the university, whether it be for increased salaries, as brought out in another section, or for other purposes, without going beyond the suggested standard.

While it is only fair to recognize that technical institutions such as the State college and the State school of mines may reasonably expect a higher per capita cost of instruction than at the State university, yet it is apparent that the State of South Dakota is not getting, nor is it as yet in a position to get, full value for the money expended at these institutions under their existing organizations.

If the plan for consolidation should be accepted, not only a reasonable reduction in general overhead expense would result, but there would be the release annually of from $50,000 to $60,000, which could be used to excellent advantage in increasing salaries, improving the institutional equipment, and general upkeep.

If consolidation is not considered advisable, the organization of the curricula at the State college and the State school of mines, in harmony with the recommendations respecting major and service lines, will doubtless effect a large reduction in the $70,000 to $80,000, which is the excess above a total operating expense based on a median per capita cost of $275.

Section 11. SUMMARY OF RECOMMENDATIONS RELATING TO HIGHER EDUCATION.

The primary recommendation of the committee involves the consolidation and reestablishment in a central location of all three higher institutions and the establishment, possibly at the abandoned sites, of three junior colleges under the direction of the consolidated university. If the State accepts such a policy, all difficulties of duplication disappear. If, on the other hand, it is not willing to adopt such a policy, it will be necessary to assign special fields to the various institutions and to suggest certain modifications in organization. In view of such uncertainty the committee presents the following substitute recommendations:

1. The instruction in engineering now offered at the school of mines should be transferred to the State college. In place of the present school there should be established a junior college under the general direction of the State university.

2. The principle of major and service lines should be applied to higher education in the State as follows: Major lines at the State university should include liberal arts, law, medicine, pharmacy, commerce, music, art, and the training of school executives, school administrators, and secondary school teachers other than those of agricultural, home economics, and industrial subjects.

Major lines at the State college should include agriculture and its related fields, home economics, engineering, mining and metallurgy, and the training of secondary school teachers and general supervisors in these subjects.

3. Until conditions warrant it, graduate instruction in advance of the master's degree should not be offered at either institution.

4. Secondary instruction at the higher institutions should be discontinued. This includes the following: (*a*) That offered by the preparatory departments at the State college and the school of mines. (*b*) That offered by the department of music at the State university and the State college. (*c*) That offered by the department of commerce at the State university and the State college. (*d*) That offered by the school of agriculture at the State college, except to students of mature years. (*e*) That offered to special students, except those who meet the regular entrance requirements or who are of mature age.

5. To insure better articulation between institutions of higher and secondary grade there should be provided an adequate system of high-school inspection and accrediting through the medium of the State department of public instruction. Admission to the higher institutions should be granted to all graduates of approved four-year high schools of the State and to candidates from other States who present certified credit for work equivalent to graduation from a four-year high school of the State. Conditional admission should be granted only to candidates who meet the general requirement and who are deficient in certain studies which are regarded as prerequisite to the chosen curriculum. In place of the present disjointed statement concerning prescribed subjects for admission and graduation there should be provided for each line of specialized study offered by the State's higher institutions a published statement showing what is believed to be appropriate sequences of studies and an acceptable amount of coordinated work covering the combined high school and college periods.

6. While South Dakota in comparison with some other States has liberally supported higher education, it must continue to increase its maintenance funds to provide for the growing demands. To this end the State should provide a millage tax, as recommended in Chapter IX. The budget plan for the disbursement of funds within each institution should be generally adopted and other improvements in financial procedure should be introduced.

7. More complete permanent records of students' work and achievements should be kept. The State college, after investigating the methods of other institutions, should revise its entire scholastic record system.

8. The functions of the office of dean should be clearly defined and should include, among other functions, the responsibility for the

formulation of well-connected curricula and the development and maintenance of strong teaching organizations.

9. A working standard should be adopted for teachers' programs. In general an instructor should not carry more than 15 hours per week and the instructional load should be from 250 to 300 clock hours.

10. A careful examination should be made of the courses offered by the higher institutions, with a view to determining, first, the courses justifiably offered on the grounds that they meet real and worthy needs and are for the proper development of institutional aims; and third, the courses now offered that may be dispensed with on the ground that they are superfluous or that they practically parallel other courses within the same or other departments. To mitigate the evil of small classes the administrative officers of each institution should give closer supervision to the departmental offerings. Special attention should be given to the possibilities of the alternative plan and to the possibility of reducing the number of similar courses in departments showing an excessive number of small enrollments.

11. As opportunity offers in the employment of new members of the instructional staffs the officers of the higher institutions should secure men and women whose qualifications are attested by the attainment of higher degrees received from institutions of standing and those whose qualifications include a capacity for productive scholarship. The administrative officers should guard against the dangers of educational inbreeding.

12. The State should establish a definite policy regarding salaries at the several institutions, including a salary schedule for faculty members from assistant professor to dean. The present practice of considering salary requirements in the same category as appropriations involving buildings, expansions, or even equipment and maintenance, should be discontinued.

13. With a view to developing and maintaining efficient working staffs, the administrative officers should give serious consideration to such matters as opportunities for professional improvement, retiring allowances, comfortable living conditions, convenient and suitable office facilities, adequate working equipment, freedom of initiative, etc.

THE UNIVERSITY.

14. The college of law should be organized on the basis of a four-year course.

15. The extension work of the university should be more liberally supported and more definitely organized and its policies concerning standards should be more clearly defined.

16. The department of education should be reorganized as a distinct school of education in charge of a dean. Such an organization should include a practice high school for supplying the facilities for practice teaching.

THE STATE COLLEGE.

17. The proportion of technical work required for the agricultural curriculum should be increased, especially in farm mechanics and agricultural engineering.

18. Each of the agricultural departments should include all technical experts in the subject concerned, whether engaged in teaching, research or extension. The practice of grouping science experts such as soil chemists, dairy bacteriologists, etc., with the technical departments rather than with their respective science departments should be discontinued.

19. The work in home economics at the State college should be reorganized as a distinct division.

20. Better facilities and increased appropriations are recommended for the library at the State college.

21. The teacher-training work at the State college should be expanded. To meet immediate needs the work may be organized as a department in the general service division, with major options in agricultural education, industrial education, and home economics education. Specialists in the methods of teaching these subjects and in rural life should be provided to work in close touch with the respective divisions of the college. Adequate provision should be made for practice teaching.

Chapter XXI.

SUMMARY OF THE MOST IMPORTANT RECOMMENDATIONS CONTAINED IN FOREGOING CHAPTERS, CLASSIFIED AS LEGISLATIVE AND ADMINISTRATIVE.

Section 1. LEGISLATIVE.

1. The enlargement of the present State board of regents of education with the following powers and duties:

(*a*) To retain and continue all the powers and duties now held under law for the administration of the State university, the State college, and the State normal schools.

(*b*) To have general oversight and control of the public-school system of the State.

(*c*) To choose a superintendent of public instruction as the executive official of the State board of education and head of the State department of education.

(*d*) To require uniform records and reports, in form to be prescribed by the superintendent of public instruction, from all educational institutions supported by the State, and from all other organizations doing educational work receiving State accreditment and recognition.

(*e*) To classify and standardize, under the direction of the State superintendent, the public schools of the State.

(*f*) To prescribe the standards and courses of study for the State normal schools, the educational departments of the denominational colleges and academies accredited under State law, and such other teacher-training institutions as may be established by law.

(*g*) To adopt rules and regulations for the sanitary inspection of schools and for the physical examination of school children, and, in conjunction with other State authorities, to see that the rules relating to school health, compulsory education, and child conservation be enforced.

(*h*) To have general control of the schools for the deaf and the blind and the industrial school for boys and girls.

(*i*) To act as a board of control for the State library and State historical collections.

(*j*) To transmit to the governor and the State legislature a biennial report covering all the activities of the university, the State colleges, and the State department of public instruction in its relation

to all public elementary and secondary schools and the above-mentioned higher educational institutions of the State.

(*k*) To perform such other duties and functions as are prescribed by law.

2. The reorganization of existing school districts outside of incorporated towns and cities in the State as follows:

(*a*) Legal disestablishment of all common-school districts as now organized in all counties with a school population of more than 2,000 children of school age outside of present independent town and city districts[1]; permissive disestablishment of all common-school districts in all other counties; and the establishment in lieu thereof of the county as a single school district.

(*b*) The abolition of the present district school boards in all counties of more than 2,000 children of school age outside of the present independent town and city independent districts and organization in lieu thereof in these and all other counties of county boards having the following powers and duties:

(1) To enforce the laws relating to education and the rules and regulations of the State board of regents of education within their respective counties.

(2) To elect a county superintendent and appoint such deputy county superintendent and necessary supervising officials as may be provided for under law.

(3) To appoint one subdirector for each school community within their jurisdiction, provided the county is organized on the county-unit plan.

(4) To have direct charge of all county schools in counties of more than 2,000 children of school age and in such other counties as take advantage of the county-unit act, including closing unnecessary schools, building new schools, consolidating schools, and conveying children to school at public expense, and organizing rural high schools.

(5) To elect all teachers on nomination by the county superintendent.

(6) To levy a uniform school tax on all the taxable property of the county under legal limitations, and to expend the funds thus procured to equalize educational advantages among all the school children of the county.

(7) To exercise such other powers and duties not enumerated above but which are prescribed by law.

3. The improvement of school enrollment and daily attendance by appropriate legislation, as follows:

(*a*) To begin the school year on January 1 of each year and close the same on December 31, thus making it possible to retain the same

[1] See note on page 30.

teachers throughout the growing season of the year, which should be the most important session of rural schools.

(*b*) To lengthen the teaching year to a minimum of nine school months of 20 teaching days each, provided that the teaching hours may be shortened during the season or seasons of the year when pupils' labor is essential to agricultural and other industrial work.

4. The improvement in stability and growth of the public-school system through the following definite modifications in the present system of taxation for school purposes:

(*a*) The adoption of the county as the unit of taxation; these funds when collected to be used to equalize educational advantages over the county.

(*b*) The local school community to be authorized to levy taxes and to issue bonds under legal limitations for extraordinary purposes only, such as erecting new buildings and procuring larger sites and school farms.

(*c*) Levying of a State tax equivalent to not more than one-third of the whole school maintenance of the State (including the present permanent school fund).

(*d*) Adoption of a permanent millage tax for the maintenance of the State's higher educational institutions to be apportioned according to the needs of each institution to supplant the present legislative appropriations.

(*e*) Adoption of a new basis for the distribution of the present State permanent fund and future State taxes, as follows:

(1) The permanent fund to be distributed on the basis of aggregate daily attendance and the number of teachers employed, instead of as at present on the basis of school population; provided that weak schools in sparsely settled sections of the State be credited with not to exceed 2,000 attendance days in addition to their actual aggregate daily attendance.

(2) The proposed State taxes to be awarded for consolidation of schools, teacher training in high schools, etc., only when the local school communities have indicated their cooperation by agreeing to certain requirements made by law, a stipulation under which such aid may be received.

5. The improvement of rural education through State aid on the following basis:

(*a*) That no modern one-teacher school shall utilize less than 5 acres of land for grounds and experimental purposes.

(*b*) That every such school shall erect at community expense a cottage on the premises for the teacher.

(*c*) That ample facilities be provided for a sanitary water supply.

(*d*) That ample provision be made for the installation of such

sanitary toilet and heating facilities as shall be recommended by the State board of education.

6. The establishment of the present small rural schools as modern consolidated schools and rural high schools by (*a*) passing appropriate legislation looking toward establishing associated or trading-center school areas to embrace a central village and a number of outlying schools; (*b*) creating one county high school of agricultural type in each county in the State, which may or may not be one of the central schools of an associated area; and (*c*) voting liberal State aid for the erection of any school plants and for maintenance.

7. The improvement of teaching conditions by (*a*) establishment of reasonable minimum salaries for all teachers; and (*b*) scaling all teachers' salaries to the grade of certificate held, thus placing a premium on such preparation.

8. Improving of teacher qualifications by (*a*) increasing gradually the entrance requirements of the State normal schools and lengthening their study courses; (*b*) eliminating the present third-grade certificate; (*c*) discontinuing the issue of certificates on examination as soon as the normal schools, the department of education in the university, and the department of education in the State college, and other teacher training institutions have become fully equipped to supply all the professional teachers required; and (*d*) placing the minimum requirement for permission to teach at graduation from an accredited four-year high school or its equivalent and in addition at least one year's study acquired at a professional school for teachers, the standard to go into effect not before September, 1922.

9. Increase in supply of professional teachers by (*a*) organizing teacher-training departments in not to exceed 20 fully equipped high schools and distributed over the State; the schools to organize the professional work in fifth-year classes and to receive State aid; (*b*) establishing well-equipped departments for rural teachers at all the normal schools; (*c*) enlarging the facilities of the State agricultural college to prepare teachers for vocational agriculture and home economics; (*d*) granting State bonuses to teachers as awards for long service in a single community; and (*e*) establishing a retirement fund for teachers.

10. The division of the State into extension service districts, one for each normal school, within which each normal school shall organize an extension service for the teachers of the State.

11. The preparation of courses of study for the further training of teachers in service, the satisfactory completion of which shall be necessary to secure a permanent license to teach.

12. More liberal financial support of all the normal schools to enable them to reach the largest possible number of teachers to be.

13. The improvement of higher education in the State through the consolidation and reestablishment of a central location of all three higher educational institutions and establishment probably at the abandoned sites of three junior normal colleges under the direction of the consolidated university. If this policy be accepted, all difficulties of duplication will disappear. If, on the other hand, the State be unwilling to adopt such a policy, it becomes necessary to assign special fields to the various educational institutions and to recommend certain modifications in organization. In view of such uncertainty the committee presents the following substitute recommendations:

(*a*) The discontinuance of the school of mines in its present location and the transfer of the instruction in engineering to the State college.

(*b*) A junior college to be established on the present site of the school of mines under the general direction of the State university.

Section 2. ADMINISTRATIVE.

1. The State superintendent of public instruction to be clothed with the following administrative powers and duties:

(*a*) The State superintendent of public instruction shall be the executive official of the State board of regents of education and executive head of the State department of education and shall enforce all the rules and regulations made in conformity to law by the State board for the public elementary and secondary schools.

(*b*) He shall have supervision of all the different divisions of the State department of education and shall be held responsible by the State board for the proper administration of the duties of each such subdivision.

(*c*) He shall, under the direction of the State board and in cooperation with the heads of the State teacher-training institutions and in conformity with law, prepare courses of study for these training schools and prescribe methods and standards for the certification of teachers, and the validation of teaching credentials from other States.

(*d*) He shall personally direct all educational activities wherein the State department of education, under law, cooperates with the presidents and faculties of the higher educational institutions of the State.

(*e*) He shall have such other powers and duties as under law belong to the office of the State superintendent of public instruction.

2. The county superintendent of schools to be clothed with the following powers and duties:

(*a*) To act as executive officer of the county board of education and to execute under their direction the educational policies determined upon by the county board.

(*b*) To act as chief educational official of the county, in which capacity he shall represent the county board of education; to have entire supervisory control of the common schools of his county.

(*c*) To see that the compulsory-attendance act is enforced and the child-welfare laws obeyed.

(*d*) To nominate for appointment by the county board of education one deputy superintendent or professional supervisor for each 50 schools within his county.

(*e*) To supervise the classroom practice of all county schools, either in person or through his assistants.

(*f*) To carry out all policies of the county board of education; to have charge, under the board, of all county schools, including continuation school activities, night schools, part-time schools, short courses, etc., undertaken for the promotion of vocational and other education within the county.

(*g*) To have charge of health education in the county schools, including health inspection done in conjunction with the county board of health, and to direct the work of the county nurse if such a one is appointed.

(*h*) To keep full records of all educational activities within his jurisdiction, and to make reports from time to time to the county board of education and to the State superintendent of public instruction.

(*i*) To examine candidates for special teachers' certificates.

(*j*) To perform such other duties as by law belong to the office of county superintendent.

3. The improvement of school enrollment and daily attendance through—

(*a*) A careful annual census of the school population in all school districts of the State to be made by the authorities now provided by law, but under immediate supervision from the State department of public instruction, on uniform blanks to be furnished by this department. The census to classify the school population as follows: 5 to 18 years, 6 to 21 years, over 8 and under 16 years, 6 to 14 years, and over 14 to 18 years.

(*b*) More effective enforcements of the compulsory-attendance act through the medium of the county boards of education and the county superintendents.

(*c*) A system of records to be provided by the State department of education, to be used in transferring children from community to community, that will make evasion of school attendance impossible.

4. The improvement of rural education through the adoption by the State department of education of minimum standards for modern one-teacher schools, as follows: (*a*) Teacher with specialized preparation for rural teaching; (*b*) school plant to be equipped as

practical laboratory, in which to prepare rural people for their life work.

5. The enlargement of the facilities for preparing teachers in the State normal schools on the following basis:

(*a*) The normal school at Springfield to devote its energies chiefly to preparing rural teachers.

(*b*) The normal schools at Madison and Springfield to devote their energies chiefly to preparing rural and other elementary teachers and special-subject supervisors.

(*c*) The Northern Normal and Industrial School at Aberdeen to devote its energies to preparing rural and other elementary teachers and supervisors, with special emphasis on industrial supervisors.

6. The gradual increase of entrance requirements to graduation rom an accredited four-year high school.

7. The granting of no normal-school certificates after the spring ssion of 1925 for less than the completion of two years of normal ork above high-school graduation.

8. The award, after the spring session of 1925, of a two-year course rmal-school diploma for the completion of the two-years' course ove high-school graduation, and of the advanced normal-school loma for completion of three-years' course above high-school duation.

. The provision by the normal schools for differentiated courses study of two and three years above high-school graduation.

). The establishment of special summer and irregular courses to le teachers in service to fulfill the new academic and professional irements.

. The organization of specialized rural-school departments in ection with each of the normal schools.

Liberal increase in the salaries of all normal school instruc-

The reorganization of the department of education in the Uni- y of South Dakota as a school of education in charge of a dean culty of education.

The organization of a practice high school in connection with iversity department of education.

The enlargement of the department of education in the State of agriculture to meet the new demands made upon it under ith-Hughes Act.

he systematic inspection of the accredited denominational and academies by the State department of public instruction.

he readjustment of certification privileges of the denomina- hools on the following basis:

hat Huron College, the Dakota Wesleyan University, and College alone retain the acquired right to offer life diplomas

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